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garding publication. This leaflet gives suggestions on the prepa-
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contributors to this Journal write to its office requesting a copy
of this leaflet.

DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

	PAGE
Editorials	111
Editorial Comment	115
Original Articles: Scientific and General	118
California Medical Association	148
Official Business	148
Council Minutes (298th Meeting, March 1, 1942)	149
Committee on Medical Preparedness	150
Committee on Postgraduate Activities	153
Committee on Public Policy and Legislation	154
County Societies: Membership; In Memoriam	155
Woman's Auxiliary	158
California Physicians' Service	158
Miscellany: News; Press Clippings	160
Medical Jurisprudence	164
Twenty-Five Years Ago; State Examining Board	166

EDITORIALS†

MEDICAL PREPAREDNESS: FOR ARMED FORCES AND CIVILIAN ACTIVITIES

Rôle of Physicians in Medical Preparedness.

—By this time, it should be apparent to all phy-
sicians that the medical profession of the United
States will be called on for little less than an
heroic contribution to the welfare of our Country
and for the perpetuation of the principles that
brought it into being; which fidelity to principles
has enabled it, in the years since 1776, to acquire
first place among the commonwealths of civil-
ized nations and democracies.

In World War I, the record of the medical pro-
fession was one not only of exceptional value,
but, it may be permissible to add, of splendid effi-
ciency and superior merit. When all things are
considered, it may be stated that in that great
War, no other single branch of the armed forces
excelled it in worth while accomplishment. Also,
let it be remembered that, in proportion to the
number of men enrolled and attached to the Medi-
cal Corps, the casualties suffered by its members
were higher than in any other single branch of the
services.

* * *

**Medical Profession Again Called on in Pres-
ent Emergencies.**—Now again, after little more
than a brief twenty-year span, doctors of medi-
cine must be prepared to make the supreme sacri-
fice. In a certain sense, this call to a new service
is little different than many similar experiences
that come to physicians as they are required to
combat dangerous diseases and conditions in civil
practice. There is nothing, in fact, unusual in
this, because, as disciples of the healing art, from
time immemorial physicians always have been
willing to jeopardize their own lives in the prac-
tice of their profession, when conditions so in-
dicated.

* * *

**Medical Profession will be Called on for
Massive Service.**—However, in this new World
War that has been thrust upon the United States,
in particular, by the Japanese attacks of Decem-
ber 7, 1941, the medical profession will be called

† Editorials on subjects of scientific and editorial inter-
est, contributed by members of the California Medical
Association, are printed in the Editorial Comment column
which follows.

on to play parts in events, having a bearing on national and international relationships, so massive in nature that, when the struggle is over, the practice of medicine, in days to come, probably will be much different than in the past. So much so, indeed, that, to succeeding generations of medical practitioners, the almost sudden change in practice procedures may appear to have been the culminating fulfillment of half a century or more of evolutionary transitions, instead of the end results of revolutionary social and welfare developments occurring in the short period of little more than a quarter of a century. In expressing such a point of view, there is no thought that our own Country will not go on to victory. Rather, the intent is to indicate that the present world conflict may bring into being such profound political and economic changes in the civilization and standards of the Caucasian race, that it will be impossible for the medical profession and medical practice to escape their share of displacement and readjustment.

* * *

Why Attention to Organized Medicine is Important.—If premises such as the above are sound, it behooves the members of the medical profession to give increased thought to organized medicine, in order that the methods and achievements of scientific medicine,—which have made it possible for the United States to show the lowest morbidity and mortality rates of any nation in the world,—shall not be too greatly jeopardized or, perhaps, entirely lost.

* * *

Wherein Lies the Major Menace?—The threat to existing medical practice is not so much that which comes from sectarian practice or cultist groups, because such are not new and probably, from time to time, will continue to manifest themselves. Concerning these, it may be expected that, in due course, their inherent weaknesses and fallacies will cause them to fade into their proper places and appropriate oblivion.

However, real danger to established medical practice is to be found in the groups of ambitious, so-called social welfare proponents, so many of whom at the present time are holding offices of political and publicity authority in our federal, state, and local governments. Through their influential positions they can sponsor and support plans and procedures designed to forward their fads, fancies, and other intellectual vagaries concerning the promotion of human welfare. It must not be overlooked that while they are thus acting, they are also, as individuals and as a class, keenly alert to the personal and group advantages which will accrue to them, if the bureaucracies with which they are respectively associated can be built up into stronger political entities.

Many such individuals and groups are now entrenched in our recent political framework, in

which, according to Census Bureau statistics printed in the *New York Times*, one of every eleven persons employed in the United States is today "working for the Government"!

Some of these "reformer individuals" partake of the nature of the Japanese in that, while seemingly quiet and nonantagonistic, their brains are always active in scheming how they may prosper themselves by taking advantage of the lethargy or self-sufficiency of the medical profession, many of whose disciples still remain reluctant to believe that serious danger may come to scientific medicine! A similar notion and disregard of Japanese planning in geo-politics, up to December 7th, was held by a large number of Americans. As a consequence, citizens of the United States will now be called upon to pay a bitter price for past indifference and self-contentment. Our present national lesson should be taken to heart by members of the medical profession, lest analogous calamities be inflicted upon scientific medicine.

* * *

Continued Vigilance is Important.—Present signs indicate that the military objectives to which our Country is pledged cannot be attained in less than three years. Perhaps even more time will be required. That there will be much change and confusion in established modes of living and social relationships is evident, as already exemplified in income tax, priority, and rationing regulations.

It is precisely under such conditions that designing individuals, such as the groups previously mentioned, find greatest opportunities to put their plans into realization.

* * *

Significance of an Army of Seven Million Men.

—Authoritative sources have stated that, within the next three or four years, the services of armed forces comprising from seven to ten million men may be one of the contributions our Country will be called on to make if human freedom and its blessings, as Americans understand them, are not to perish. An army of that size will mean the displacement of more than 50,000 doctors of medicine from civilian, into military practice. The accretions from the medical schools will take care only of the yearly loss through death and retirements. Physicians remaining in civilian practice will be called on to work harder, so that workers in the essential industries may be kept fit to perform their labor, since it is claimed that the work and output of ten persons in civilian life is directly or indirectly needed to maintain the efficiency and supplies of a soldier combatant. At the same time, civilian practice must also be carried on according to accepted standards. It should not be difficult to visualize that under such stress and strain, the proponents of compulsory health insurance and similar plans will have greater opportunity than ever before to promote their designs.

Physicians in Civilian Practice Have Increased Obligations.—Organized medicine, as represented by practitioners not attached to the armed forces, will have increasing responsibilities in the efforts to conserve the rights, not only of themselves, but of their military colleagues, because of activities which have been indicated. Therefore, under these conditions, battle must be waged against all forces that give indication of threats to well-established public health standards.

At Del Monte, commencing Sunday, May 3, 1942, the 71st Annual Session of the California Medical Association will begin a four day session. At that time problems, such as have been enumerated, and other pertinent phases of military, scientific and organized medicine will receive special consideration. If you who may have read these lines can arrange your schedules, you are urged to make an effort to be present. Through mutual counsel and endeavor much can be accomplished. In unity, and through unified action, there is strength. You are urged to give fullest coöperation!

C. M. A. ANNUAL SESSION—DEL MONTE, MAY 3-6, 1942

Hotel Del Monte Will be Convention Headquarters.—The formal opening of the Seventy-first Annual Session of the California Medical Association will take place on Monday morning, May 4, 1942. The place of meeting will be the well known Hotel Del Monte, which has increased its facilities for such an organization as the California Medical Association, needing for its activities, at one and the same time, some fifteen meeting rooms of varying size. Responding to those needs, the Hotel Del Monte has erected an up-to-date six-unit convention pavilion which, in addition to other rooms, will go far in providing ample accommodations both comfortable and free from noise.

In previous issues mention was made of the decision of the C. M. A. Committee on Scientific Work and the Section Secretaries,—meeting in joint conference—to emphasize, as much as possible, topics concerned with military medicine and surgery. The latest knowledge in these important subjects, therefore, will be presented.

Four general meetings will be held: on Monday, Tuesday and Wednesday mornings, and Tuesday afternoon. Scientific Sections will meet only during the afternoons. The House of Delegates will convene on Monday evening, and hold a recessed meeting on Wednesday afternoon and evening. The Council will hold a daily conference.

On Sunday, meetings of affiliated organizations and officers will be held. Administrative members of California Physicians' Service will have a luncheon conference on Tuesday noon. Bulletin boards should be scanned for special announcements.

The April issue of CALIFORNIA AND WESTERN MEDICINE will contain the "Pre-Convention Bul-

letin," with reports of officers and complete programs, brief abstracts of papers, and other information. Members are urged to look over its pages.

Let us keep in mind that the present emergencies show, more than ever, why members of the profession should get together and counsel with one another. Many new problems, related to organized and scientific medicine, are constantly coming to the front. Some are difficult to solve. Through exchanges of opinion, however, the best road to follow may indicate itself. Every physician may ask himself whether, this year, he should not make a special effort to attend the Seventy-first Annual Session, if only for one or two days. Think it over!

POSTGRADUATE CONFERENCES

Councilor District and County Conferences.

—Since December 7th, an increasing number of physicians have joined the Medical Corps of the United States Army and Navy; and the medical schools are operating through the twelve calendar months, in an effort to make available, for the armed forces, a larger number of medical men. The extra responsibilities in the care of workers in the essential industries, associated as they are with the routine supervision of citizens in civil life, add much to the burdens of members of the profession who remain in civil practice. As the days go by, more of these colleagues,—practically all under the age of 36 and probably all under the age of 45 who are physically fit,—apparently will be needed for Army and Navy service.

Officers in command of military hospitals and posts in California must be prepared for all emergencies. They are, therefore, reluctant to grant leaves of absence to staff members, even for postgraduate or refresher courses on military medicine, instituted by county medical societies.

Faculty members of the medical schools, too, not only have been obliged to assume the work of associates who have gone into military service, but to continue to do this throughout the entire calendar year.

Under these conditions, the C. M. A. Committee on Postgraduate Activities has found it difficult to command speakers for county society meetings even when subjects dealing with military medicine would be emphasized.

At Bakersfield, in Kern County, on Saturday and Sunday, March 7th and 8th, the Third Councilor District held its annual postgraduate conference.* A perusal of the report thereon and the program is suggested, since it may be possible for the State Association Postgraduate Committee to secure speakers for a limited number of such Councilor District Conferences.

There is a special value in refresher courses when held for several counties, because such occasions make for the promotion of good fellowship

* For program, see department of Committee on Postgraduate Activities, on page 153.

and better understanding, not only for members of the sponsoring component unit, but also for the adjacent and cooperating county medical societies. A councilor district esprit de corps is a valuable adjunct to organized and scientific medicine. Councilor district refresher courses are well worthy of consideration.

DEATH OF CHARLES A. DUKES, M.D.

On Saturday and Sunday, March 7th and 8th, at the 3rd Councilor District Postgraduate and Organization Conference in Bakersfield, Doctor Charles A. Dukes of Oakland, Vice President of the American Medical Association, member of the National Committee on Medical Preparedness and Chairman of the Advisory Committee of the Procurement and Assignment Service for the Ninth Corps area, was one of the guest speakers. Doctor Dukes, with his natural ease and charm, explained, to those present, various steps that were taken by the A. M. A., the C. M. A. and the component county medical societies, urging increased alertness on the part of the medical profession, and the work which only its members could carry on.

Returning to his duties in Oakland, he found himself somewhat indisposed, at first remaining home, and then going to the Merritt Hospital, where death came to him on the afternoon of Friday, March 13th.

For many years, Charles A. Dukes was an active worker for the interests of scientific and organized medicine. As an officer of the Alameda County and California Medical Associations (president in 1940), and in spite of periods of ill health that would have held back many others from taking on duties,—when reward could be little more than the reassuring self knowledge, that one's endeavors had been rendered to the best of personal ability,—he found it difficult to refuse to carry the extra burdens that were handed to him, because of his well-established reputation of conscientious service.

For years he was elected a delegate to the American Medical Association by his California colleagues, and his wise counsel and other qualities in the A. M. A. House of Delegates brought to him both personal and collective recognition. When war conditions were in the offing, the Trustees of the American Medical Association voted that he should be a member of the National Committee on Medical Preparedness. In California he was the only physician on the Governor's original Council on Defense. Subsequently, when the important department known as the Federal Procurement and Assignment Service was brought into being by President Roosevelt on October 30, 1941, the Hon. Paul V. McNutt, Federal Security Administrator, appointed Dr. Dukes as chairman of the Ninth Corps Area under the Federal Office of Defense, Health and Welfare Service,* and he

took on these additional obligations in a new governmental office adjacent to his own, in Oakland.

When the National Physicians' Committee for the Extension of Medical Service was organized several years ago, Doctor Dukes was elected a member of the Executive Board, representing the Pacific States. In the California Medical Association, one of his special interests was that of the C. M. A. Cancer Commission, he being its chairman.

In his professional work as a physician and surgeon, by ability and conscientious attention and charming approach, he endeared himself to many citizens who came under his care. Now that he is no longer with us, it will not be easy to find others to take up his many activities in equally efficient and generous manner. Doctor Dukes will be missed.

NINTH CORPS AREA PROCUREMENT AND ASSIGNMENT SERVICE

Henry S. Rogers Appointed.—The death of Doctor Charles A. Dukes left the Ninth Corps Area Procurement and Assignment Service without a head. Because applications for deferments were rapidly accumulating, with danger of assignment of physicians to line service instead of the Medical Corps of Army or Navy, prompt action was necessary.

In the emergency, the authorities (Office of Emergency Management of the "Office of Defense, Health and Welfare Services") through Hon. Paul V. McNutt, Director and Federal Security Administrator, appointed to succeed the late Doctor Dukes, the President of the California Medical Association, Henry S. Rogers, M. D., of Petaluma.

The work of the Ninth Corps Area Procurement and Assignment Service will be carried on under the supervision of Doctor Rogers, in Room 1938, Four Fifty Sutter Building, San Francisco. This memorandum is inserted for the information of those who may be interested, as the March issue of CALIFORNIA AND WESTERN MEDICINE goes to press.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 148.

Keep Morale High: V points, each may sharpen for Victory:

- I. Do daily work better, each job more carefully.
- II. Keep personal affairs in order, keep physical possessions in shape.
- III. Keep healthy, avoid excesses.
- IV. Conserve; buy war bonds.
- V. Stop rumor and gossip, study for peace.

* See CALIFORNIA AND WESTERN MEDICINE, February, 1942, on page 84.

EDITORIAL COMMENT†

ISO-ANTIGENIC THRESHOLD

Recent attempts to explain erythroblastosis foetalis¹ and puerperal eclampsia² as results of reactions between fetal isoantigens and maternal iso-antibodies, render Lewis' current studies of the immunologic properties of cerebral iso-haptens of pertinent clinical interest.

Following the demonstration that lens proteins are alien to other tissues of the animal body, numerous other organ-specific and potentially iso-antigenic proteins were described, prominent among them being: thyroglobulin,³ fibrinogen⁴ and casein.⁵ It was shown that each of these is iso-antigenic in rabbits, and will give rise to specific iso-antibodies if repeatedly injected in sufficiently large doses. Interest in organ-specific antigens was heightened by the subsequent discovery that certain organ-specific lipoids and carbohydrates form an essential part of cytoplasm and may determine or modify organ specificity. It was shown by Witebsky,⁶ for example, that alien brain emulsions injected into rabbits gave rise to brain-specific antibodies, reacting with a wide range of animal brains, including the brains of rabbits. Rabbits, therefore, are capable of forming antibodies against their own nerve cells, in the same way that they can produce anti-lens precipitins of sufficiently high titer to cause allergic reactions with their own eye tissues.⁷

Witebsky found that the organ-specific determinant common to all brains is an alcohol-extractable lipid. Injected by itself this brain lipid is apparently non-antigenic. When tested by routine *in vitro* methods, however, the lipid gives specific complement-deviation reactions with anti-brain serums. The lipid is, therefore, classified as an "incomplete antigen", or "hapten". Lewis⁸ was able to demonstrate the same brain lipid in the testicle, suggesting the possibility that an auto-genous anti-testicular immunity may cause secondary functional or anatomical changes in the nervous system.

These earlier studies of cerebral haptens were made with antisera prepared by injecting rabbits with alien brain emulsions. The active fraction in this heterologous material presumably consists of lipoidal haptens in loose chemical combination with the brain proteins. This alien protein "carrier" is apparently an essential part of the complete antigen, since the same lipoids in normal combination with homologous brain proteins are non-antigenic. This conclusion was confirmed by Lewis, who found that rabbit brain lipoids can be rendered fully iso-antigenic by adsorption on horse proteins. The anti-horse-anti-brain rabbit serum thus obtained will differentiate

sharply between the extracted lipoids of various organs: liver, kidney, heart, lungs and spleen giving negative complement-fixation reactions, while both brain and testicular lipoids give positive reactions.

If we should apply this law of hapten antigenicity to the currently controversial question of the immuno-pathology of pregnancy, it would be necessary to assume that in addition to the giving off of organ-specific fetal haptens, there must be a local production or formation of alien or denatured fetal proteins to serve as the necessary hapten-carriers. Theoretically, without this denatured protein carrier the fetal haptens would not stimulate the production of maternal antibodies. The necessity for a denatured protein carrier has been largely overlooked by recent clinical investigators, who have ignored the fact that the so-called A, B, O, and Rh "agglutinogens" are in reality incomplete antigens or haptens.⁹

Clinicians, however, will find an even more important challenge to their conventional logic in Lewis' emphasis on the normal metabolic utilization or homologization¹⁰ of iso-antigens by the reticulo-endothelial cells and other fixed tissues. Fibrinogen is a normal constituent of the circulating blood, while thyroglobulin and casein are probably often given off into the blood stream. All three are known to be iso-antigenic. Nevertheless there is no conclusive evidence that under normal conditions they stimulate the production of iso-antibodies. There is evidently a very effective biochemical mechanism for the hydrolysis, utilization, or homologization of these organ-specific substances. Only under some unknown conditions of fixed-tissue deficiency is iso-antibody production found necessary. Duke,¹¹ for example, reports one such case, a lactating mother who suffered from allergic reactions when she weaned her child, and in whose blood there were subsequently demonstrated specific antibodies reacting with human casein, but giving negative reactions with cow's milk.

If one should apply the same theory to the currently controversial problem of the iso-antibodies of pregnancy, one would conclude that erythroblastosis foetalis and puerperal eclampsia are presumably not primarily the result of the formation and liberation of fetal isoantigens, but essentially the result of some unknown lowering of the normal destruction of these fetal iso-antigens by maternal tissues, a lowered maternal tissue defense. Such a basic maternal tissue deficiency might conceivably be corrected by appropriate dieting methods.

Lewis has rendered a distinct service to clinical science by emphasizing this most promising field of basic immunochemical research.

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REFERENCES

1. Levine, P., Katzin, E. M., and Burnham, L.: *J. A. M. A.*, 116, 825, 1941.
2. Yamada, K. I.: *Jap. Jour. Obst. and Gynec.*, 23, 141, 1940.

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

3. Lewis, J. H.: *Jour. Immunol.*, 41, 397, (Aug.), 1941.
4. Hektoen, L.: *Proc. Nat. Acad. Sci.*, 11, 481, 1925.
5. Hektoen, L., and Welker, W. H.: *Jour. Infect. Dis.*, 40, 706, 1927.
6. Lewis, J. H.: *Jour. Infect. Dis.*, 55, 168, 1934.
7. Witebsky, E., and Steinfeld, J.: *Zeitschr. f. Immunitätsforsch.*, 58, 271, 1928.
8. Burky, E. L.: *Jour. Allergy*, 5, 466, 1933-4.
9. Lewis, J. H.: *Jour. Immunol.*, 24, 193; 27, 473, 1934.
10. Witebsky, E., and Klendshoj, N. C.: *Jour. Exp. Med.*, 75, 655, 1941.
11. Sox, H. C., Azevedo, J. L. and Manwaring, W. H.: *Jour. Immunol.*, 21, 409, 1931.
12. Duke, W. W.: *J.A.M.A.*, 98, 1445, 1932.

A POSSIBLE CLUE FOR CAUSE OF PLANE CRASHES

A possible clue to one of the factors that may have played a part in some of the recent airplane crashes, the cause of which has mystified investigators, is suggested by C. C. Bunch, Ph.D., St. Louis.

In his discussion of "The Problem of Deafness in Aviators," Dr. Bunch says: "Newspaper accounts of the investigations of recent airplane accidents do not mention the hearing ability of the pilots involved. The reports of the circumstances of several accidents lead one to think that in certain instances the pilots were not following the radio beam. In that at Salt Lake City the newspaper account stated that the plane was approaching the landing field on the radio beam. A few moments later the pilot turned off his course. A storm was in progress at the time. In the recent Chicago accident it was reported that the pilot was attempting to land on the wrong runway. A snow storm was in progress.

"As in the case of the graduate student whose audiogram is recorded [in a chart in the article], the pilot may not be aware of any hearing loss at all. On the other hand, if he did know of it but was unaware of its significance in his profession, it would be human nature for him to attempt to conceal it. These problems may be solved only by frequent accurate audiometric tests by competent examiners."

In his comment on the general problems presented by the subject, Dr. Bunch says that blacksmiths' deafness has been known since 1830 and that as the steel industry developed this peculiar form of deafness became sufficiently well known to be called boilermakers' deafness.

"According to the best information available," he continues, "the noise in a boiler shop reaches an intensity of level of about 100 decibels and that from an airplane motor about 110 decibels. If continuous exposure to the noise in a boiler shop results in diminished hearing, it is logical to expect that . . . the louder noise [of airplane motors] will produce hearing losses more frequently and more quickly. . . .

"There is no evidence that the ordinary use of the telephone will result in deafness. . . .

"The public knows that the pilots of modern

planes are at times in communication with the radio stations located at landing fields. . . . Whether the conditions under which he must use his radio would result in diminished hearing is not known to the interested public. . . . Padden, discussing Wright's paper entitled 'Medical Supervision of Air Lines,' made these significant remarks:

"The increasing importance of radio and radio beams finds a condition of static ears occurring in quite a number of pilots. It requires intense concentration for a pilot to listen four hours to *ta-ti-ta*. Occasionally I sit up front and stick the ear phones on and I don't wonder they get static ears with electrical storms, etc. I think I'd have static ears in one trip.'

"Just what he meant by 'static ears' is difficult to understand. It is possible that the static which occurs during thunder storms might cause temporary or permanent hearing losses which would adversely affect the pilot's efficiency?

'Nearly every one has had the unpleasant experience of attempting to use a telephone located in a noisy place. The pilot must use his radio in the presence of the roar of the motors of his ship, and in order to hear it he must turn it on louder than would ordinarily be necessary. Unfortunately, as he increases the loudness of his radio signal he must also increase the loudness of the static, thus creating a grave situation to say the least. . . .'

In summarizing his discussion, Dr. Bunch says:

"It is not scientific to assume that hearing losses which have been found in those who are employed in one industry will be found in those employed in another unless a common cause exists. In this instance it appears that a common cause, that is, excessively loud noise, exists. The following conclusions appear to be definite but cannot be proved without more complete investigation:

"1. The best evidence available indicates that the loud noises of airplanes and airplane motors often cause definite hearing losses in pilots.

"2. All pilots are not affected to the same degree.

"3. The hearing loss most frequently encountered in those who have been exposed to loud noises is for tones near c-4 (2048 double vibrations) and c-5 (4096 double vibrations). As the loss progresses with continued exposure, the acuity for tones of lower pitch is also affected.

"4. Pilots who have decreased acuity for tones near c-3 (1024 double vibrations) will have difficulty in understanding certain words over the radio and may not be able to understand exact landing instructions.

"5. If the radio guide beam has a frequency near c-3 (1024 double vibrations) pilots with [decreased] hearing losses [for tones near c-3] can follow it only when they keep their radios tuned on louder than is ordinarily necessary.

"6. Lightning-created static in the ears of

pilots who have their radios turned on loud may cause additional temporary or permanent hearing losses and incapacitate them to such an extent that they may be unable to hear the radio beam.

"7. The hearing loss in aviators is not unlike that in other persons who are constantly exposed to sounds of great intensity.

"8. Hearing losses of this type often escape detection. Those affected may be unaware of it. It cannot often be discovered in spoken voice tests as they are ordinarily conducted.

"9. A systematic study of the hearing of aviators should settle the dispute which exists among those who have interested themselves in this subject. It should determine (1) whether certain fliers are more susceptible than others to hearing losses caused by the noise of airplanes, (2) whether certain types of planes or motors are more harmful to hearing than others, (3) whether it is possible to develop adequate protective devices for the ears, (4) whether certain candidates should be excused from this type of training because they are more susceptible than others to the effects of noise and (5) whether selection and protection cannot raise the efficiency and safety of the flying services."

MEDICAL EPONYM

Jackson's Membrane

Jabez N. Jackson (1868-1935), of Kansas City, Missouri, read a paper before the Western Surgical Society at Minneapolis, Minnesota, in December, 1908, entitled "Membranous Pericolicitis." This was printed with revisions and additions in *Surgery, Gynecology and Obstetrics* (9:278-287, 1909).

"Wherever . . . we find any late manifestations of peritoneal disturbance about the colon we have been content to label it 'adhesions,' presume an antecedent acute appendicitis, and pass on. Some very striking . . . observations . . . have persuaded [the writer] that there is a most interesting pathological condition occurring about the right colon which can not thus readily be set aside. . . . The following description . . . is . . . from the report of Dr. Frank Hall, pathologist. . . . 'From a point just at the hepatic flexure to three inches above the caput there spreads from the parietal margin over the external lateral margin to the internal longitudinal muscle band a thin vascular veil.'"

"Synchronously with our recognition of the distinct pathology and clinical identity of this condition, we had been impressed with the view that this pericolic membrane by its mechanical interference with colonic peristalsis was possibly, if not probably responsible for the chain of symptoms which were manifest when it was found present"—R. W. B., in *New England Journal of Medicine*, Vol. 225, No. 5.

MEDICAL EPONYM

Ewing's Sarcoma

Dr. James Ewing, oncologist and professor of pathology at Cornell University Medical College, New York City, discussed "Diffuse Endothelioma of Bone" before the New York Pathological Society and published his paper in the *Proceedings of the New York Pathological Society* (21:17-24, 1921).

"For some years I have been encountering in material

cured from bone tumors a structure which differed markedly from that of osteogenic sarcoma, was not identical with any known form of myeloma, and which had to be designated by the vague term "round cell sarcoma" of unknown origin and nature. . . . They occurred in subjects from fourteen to nineteen years of age. The tumors grew rather slowly, requiring some months to attract attention, but they were accompanied by attacks of pain and disability. . . . The radiographs give characteristic features on which a diagnosis may be based with considerable certainty. A large portion or the whole of the shaft is involved, but the ends are generally spared, contrary to the rule with osteogenic sarcoma. The shaft is slightly widened, but the main alteration is a gradual diffuse fading of the bone structure. Bone production has been entirely absent. Some of the bones appeared honeycombed. Perforation of the shaft and sharp limitation of the process are wanting. The central excavation with widened bony capsule, as seen in benign giant cell tumors, is missing. . . . The probable endothelial nature of the tumor was suggested by the form of the cells, and especially by the appearance in broad sheets of polyhedral cells without intervening stroma. . . . The possible relation of the endothelial tumor to plasma cell or other forms of multiple myeloma deserves consideration."—R. W. B., in *New England Journal of Medicine*, Vol. 223, No. 21.

MEDICAL EPONYM

Krönig's Isthmus

Dr. Georg Krönig (1856-1911), docent in the University of Berlin, published his paper "Zur Topographie der Lungenspitzen und ihrer Percussion (On the Topography and Percussion of the Lung Apices)" in the *Berliner klinische Wochenschrift* (26:809-812, 1889). A portion of the translation follows:

"The examination of a patient who had been referred to me was the beginning of a series of determinations of the borders of the lung apices, as well as the lung margins which I briefly report here. After I had determined the anterior supraclavicular margin of the lung in the usual fashion, that is by gentle percussion, I proceeded, still percussing very lightly to the posterior aspect and thereby obtained the following results. On the right side, as on the left, there appeared a line that extended medially in a wide arch, with its convexity directed inward, and approached to within a centimeter of the midline on the left at the level of a line between the second and third thoracic spines, on the right at the level of the fourth thoracic spine. In this case, the right apex was diseased . . . while the left showed a normal condition. . . . Inasmuch as I had obviously been successful in determining not only the height of the lung apices but also their breadth, . . . I tried to determine similarly the lateral margin. . . . The determination of the posterior lateral border is easy in many cases, especially in thin persons, but is frequently difficult in powerfully built, extremely muscular, or fat persons. The lateral border, which I have outlined on the anterior surface is extremely trustworthy. It runs from about the middle of the anterior margin of the trapezius muscle, curves down sharply, cuts the clavicle at about the line between its middle and outer third, and then courses outward diagonally to the axilla. From the configuration of these normal clinical margins, it will now be possible, without great difficulty, to hypothesize the necessary shift that will occur when there are pathologic changes in the lung apices. Diseases that reduce the air content will shift the medial border outward and the lateral border inward."—R. W. B., in *New England Journal of Medicine*, Vol. 225, No. 18.

ORIGINAL ARTICLES

COMMON BILE DUCT: ITS RECONSTRUCTION BY TRANSPLANTATION OF BILIARY FISTULA*

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BENIGN stricture of the extrahepatic bile ducts, due to cicatricial contracture, causes obstructive jaundice, and unless quickly and permanently relieved, results in hydrohepatosis, biliary cirrhosis and death. It is one of the most difficult situations encountered in surgical practice; desperate from the standpoint of the patient, because his life depends on the successful relief of the obstruction, and desperate from the standpoint of the surgeon, because it taxes his ingenuity, judgment and technical skill to the utmost. I am sure that all surgeons who have been in these trying situations, and most of us have, will agree with me.

ETIOLOGIC FACTORS IN STRICTURE

It is universally conceded that a large proportion of benign strictures, in fact the great majority of them, are due to technical errors in the performance of cholecystectomy; particularly, partial or complete division of the hepatic or common duct, the accidental inclusion of these structures in a ligature, or pressure necrosis of the ducts induced by the inadvertent application of hemostats. In all fairness, however, we know that all of these unfortunate accidents are not due to inexperience or poor technique. Abnormalities of the cystic duct, the cystic artery and of the main bile ducts themselves, which have been described many times, may and do prove pitfalls for the most skilled operator.

Not all postoperative strictures, however, are due to the above-mentioned surgical accidents. A certain proportion, and a sizeable proportion at that, are due to an obliterative cholangitis and choledochitis, an extension into the ducts of the same inflammatory process for which the gallbladder was removed. It is this latter type of case which forms the basis for this discussion.

E. Starr Judd,¹ in 1926, presented a comprehensive review of sixty-four cases of postoperative stenosis of the bile ducts. He classified them as follows: (1) those due to an obliterative cholangitis, (2) those in which trauma during cholecystectomy resulted in biliary fistula, and (3) those that arose from operative trauma but, because of closure of the ducts, caused a complete and persistent obstruction. In sixteen or 25 per cent of the cases, the condition was the result of

cholangitis. In a large proportion the extrahepatic ducts were patent, for months or years following cholecystectomy, before obstruction developed. It would be difficult to visualize surgical trauma the etiologic factor here. In other instances jaundice began soon after removal of the gallbladder. At the secondary operation no stone was found, but the entire length of the common duct was involved in a subacute inflammatory process, with edema and dense masses of recent adhesions. Judd concluded that the disease for which the gallbladder was removed was part of the same inflammatory obliterative process which extends into the ducts. This same entity has been described by Walters,² Phillips,³ Carter,⁴ Elliott,⁵ Lahey⁶ and others.

The relief of this condition, as stated above, is one of the most difficult situations we are called upon to meet. There are two reasons for this: (1) all these patients have been operated upon at least once or several times before. Dense masses of adhesions and cicatricial tissue obscure the region of the extrahepatic ducts, and this is made worse by the very nature of the inflammatory processes in the ducts themselves. The technical difficulties here are obvious. (2) These patients all have varying degrees of cholangitis and parenchymal liver cell damage, which not only increase the immediate surgical risk, but mitigate against an eventual return to normal physiologic function.

TECHNICAL PROCEDURES

In general there are three operative procedures commonly used in the repair of stricture: 1. Choledochoduodenostomy or hepaticoduodenostomy, as advocated by W. J. Mayo in 1905. 2. Excision of a localized stricture, with some type of plastic repair or anastomosis of the cut ends of the duct. 3. The establishment of an external biliary fistula, with its subsequent implantation into the gut in cases where no hepatic duct remains.

There is no question but that the procedure of choice, when possible, is hepaticoduodenostomy. Its success is dependent on the fact that enough of the hepatic duct remains above the stricture to allow an accurate mucous membrane to mucous membrane anastomosis between its cut-end and the duodenum over a McArthur tube. If the stricture is localized, segmental excision with anastomosis of the cut ends by the Carrell technique, or some type of plastic enlargement of the lumen, is likewise successful in many instances.

Walters⁷ has recently reported a review of eighty cases of benign stricture operated on by him. In forty-nine, or 61 per cent of these there was enough duct left above the stricture to permit hepaticoduodenostomy. Thirty-three or 68 per cent of these patients have remained well, some for more than five years. In twelve, or 15 per cent, the stricture was sufficiently localized to allow segmental resection and end-to-end anastomosis of the duct. Fifty-eight per cent of these patients have been well since operation.

* Read before the Section on General Surgery at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

From the West Surgical Service, Highland Hospital, Oakland.

The most serious type of case, however, is that in which no extrahepatic duct remains above the stricture. Obviously no type of anastomosis can be performed here. With all its shortcomings, establishment of an external fistula, with subsequent implantation into the intestine, may be and is successful in a certain percentage of cases. In Walters' series, fifteen or 19 per cent of the eighty cases fell into this category. In seven of the fifteen, the fistula was later implanted into the duodenum. Four of these patients have remained well, some over a period of years.

This procedure was first performed by Hugh Williams in 1913. Sixteen years later the patient had had no recurrence of obstruction. Other cases have been reported by St. John,⁹ Russell,¹⁰ Lilienthal,¹¹ Roeder,¹² Lahey,¹³ Walters¹⁴ and

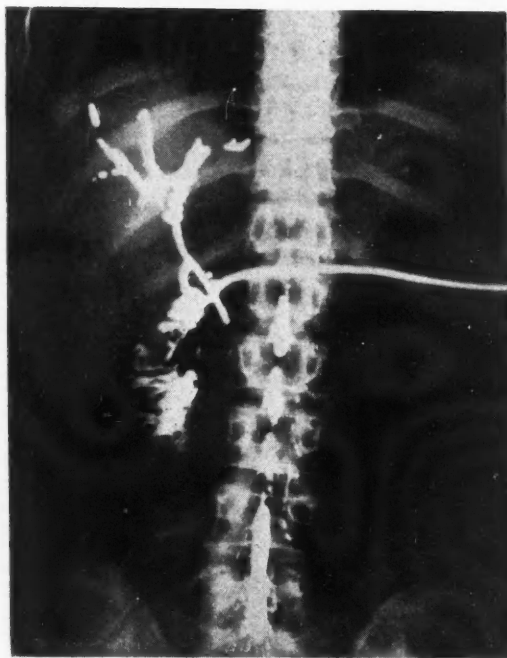


Fig. 1.—Lipiodol injection through T tube, showing hepatic and common ducts patent.

others. Wilson¹⁵ has reported an interesting and successful modification of this procedure, in 1939, which may have considerable merit. Ellsworth Elliott,⁶ in 1936, reviewed forty-one collected cases. There was an operative mortality of about 22 per cent. Thirty-eight of these cases had accurate follow-up records. Twelve or 32 per cent had good results over a period of years. The failures resulted either from rapid contraction of the fistulous tract with reobstruction or repeated increasing attacks of cholangitis from ascending infection with eventual cirrhosis. Lahey feels, and undoubtedly with justification, that the operation is a makeshift, and should be used only

in cases of last resort. It is in just such cases, however, which are otherwise hopeless, that the procedure does give a fair chance of relief and certainly has its place.

There are a few technical points to remember. When the region of the common duct is exposed, and no amount of dissection reveals either the common or hepatic duct, the dissection should then be carried into the porta hepatis until bile is found under pressure. Bile will come either from a small nub of the hepatic duct, or from the right or left branch. A number-20 catheter is then sutured in place. At least three or four months should be allowed for the resulting fistulous tract to form and establish a good blood supply. In the actual transplantation, the dissection should be in the form of a cone leaving the base of the fistula wider than the distal end. This dissection should not be carried beyond the liver edge. No tension should be allowed to exist between the base of the fistula and the intestine. If the duodenum cannot be brought over without tension, a loop of the jejunum, as advocated by Lahey, should be brought up, the fistula implanted, and the bowel anchored to the liver capsule. These steps are essential in order to preserve as good a blood supply to the fistula as possible, as it is on adequate circulation that the success of this procedure largely depends.

REPORT OF CASE

CASE 1.—Mrs. C. J., a white woman, age 30, was admitted to Highland Hospital August 1, 1938. Her complaint was right upper quadrant colic pain radiating to the back, some nausea and vomiting, idiosyncrasy to fatty foods of three months' duration. There was no jaundice, chills or fever. She had an appendectomy performed in 1920 and Caesarian section in 1924. Physical examination was negative. Gallbladder visualization and G. I. series were negative. *Diagnosis:* Mild chronic cholecystitis. She was dismissed on a dietary régime.

One month later, September 1, 1938, she was readmitted to the hospital. Her symptoms had increased in severity and frequency, with numerous attacks of biliary colic requiring morphine for relief. There was no jaundice. She was observed in the hospital and had several attacks of typical gallbladder colic. Her temperature and blood count were normal. Icterus index was 5. *Diagnosis:* Chronic cholecystitis, with probable stones. *Operation,* September 10, 1938. The gallbladder was found to be thickened. There were many adhesions around it. The common duct was exposed. It seemed normal. It was not opened. A cholecystectomy was done without incident. At the close of the operation the stump of the cystic duct was well visualized, and there was no interference with the common or hepatic ducts. Two Penrose drains were used. There was very slight bile drainage for forty-eight hours, at which time the drains were removed. The wound healed quickly and the patient was allowed up on tenth day postoperative. *Pathological report.* Marked chronic catarrhal cholecystitis, with thickened dirty bile. No stones found.

On the 14th day postoperative, as the patient was ready for dismissal, slight jaundice was noted. Icterus index was 30 and the Van den Bergh reaction was positive direct. Duodenal drainage on three successive days showed no bile in the duodenum. Nitroglycerin and magnesium sulphate were administered repeatedly with-

out relief. On the 18th day postoperative the jaundice was worse. Epigastric pain developed. The icterus index was 60. *Diagnosis:* Postoperative common duct obstruction, probably stone. *Reoperation.* September 30, 20 days postoperative. The gallbladder fossa was filled with dense recent adhesions. The region of the common duct was exposed. The entire length of the duct was involved in

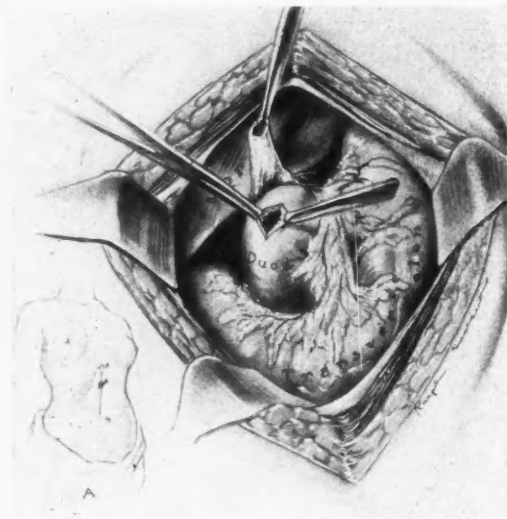


Fig. 2.—Fistula coned out down to liver edge.

an inflammatory mass with edema and recent adhesions. The duct was exposed. It was not dilated. It was opened. The bile was rather dirty and under no particular pressure. Probes and scoops were passed through the ampulla and up into both right and left hepatic ducts. No stones were found after a diligent search. The pancreas was normal. A soft T tube was placed in the common duct. Lipiodol injection showed the ampulla to be well open and no evidence of obstruction in the hepatic ducts. (Fig. 1). The jaundice subsided rapidly and the patient was dismissed on the 21st day postoperative, with the T tube in place. Icterus index 3. Six weeks later she returned, the T tube was removed, and the fistula closed in 48 hours.

Comment. It seems reasonable to assume that this was a case of subacute postoperative cholangitis and cholelithiasis as described by Judd. Certainly there was no apparent injury to the extrahepatic ducts. The jaundice was due either to pressure of the inflammatory mass and edema of the duct, or, as Walters believes, to parenchymal liver cell damage incident to cholangitis.

Four months later, March 26, 1939, the patient was again admitted to the hospital. She had had right upper quadrant pain, jaundice, chills and fever for one week. Icterus index was 35. Duodenal drainage showed large amounts of bile in the duodenum. The jaundice cleared up rapidly, her fever subsided and she was dismissed in ten days. Icterus index 6.

Comment. This episode confirmed our previous supposition that her original postoperative jaundice was due to cholangitis. We felt that in spite of prolonged T tube drainage, recurrence of an acute cholangitis four months later made her future outlook dubious.

Nine months later, January 1, 1940, the patient was again admitted to the hospital. She had had marked jaundice, right upper quadrant pain, chills and fever for three weeks. She was quite sick, jaundice and anemic. Icterus index was 40. Repeated duodenal drainage showed no bile in the duodenum. Jaundice increased. Patient was given supportive treatment and transfused. January 18th icterus index was 100. *Diagnosis:* Complete common duct obstruction.

Reoperation January 20, 1940. The region of the common duct was exposed with difficulty. There were dense cicatricial adhesions involving the whole region. No amount of dissection revealed any evidence of the common or hepatic duct. The dissection was then carried into the porta hepatis. Finally bile was found under pressure. It probably came from a nub of the hepatic duct or the left hepatic duct itself. Obviously any attempt at anastomosis with the intestine was out of the question. A number-20 catheter was placed in the stump of the duct, with the idea of forming an external fistula. Bile drained freely and the patient improved rapidly. She was dismissed twenty-five days postoperative with the catheter in place. Icterus index 5. The patient returned three months later. Her general condition was excellent. The fistula was well formed and clean. Icterus index was 3. She had had no attacks of cholangitis. April 15, 1940, the fistula was cored out, as described above, and transplanted into the duodenum. (Figs. 2-3). The wound was closed without drainage. The postoperative course was uneventful. There was no bile drainage from the wound. Patient dismissed on the fifteenth day postoperative. Icterus index was 2.

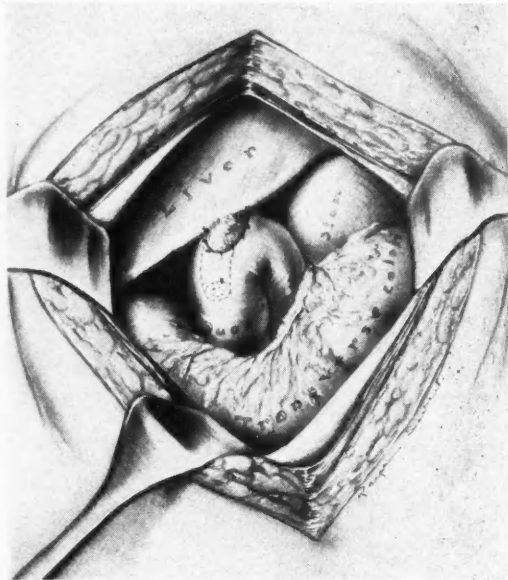


Fig. 3.—Fistula transplanted into duodenum without tension.

This patient has been followed closely for the past year. The first six months she had two attacks of mild cholangitis lasting four to five days, with slight icterus. There was no fever. Icterus index was never over 10. The past six months she has been perfectly well.

Comment. The follow-up course of this patient demonstrates a point brought out by both Judd and Walters.

namely that in successful transplants occasional mild attacks of cholangitis will supervene which gradually get less frequent and finally cease. We are very hopeful as to the future outlook of this patient.

SUMMARY

1. While most cases of benign postoperative common duct stricture are due to technical errors in cholecystectomy, there is a definite group which is due to obliterative cholangitis.

2. The procedure of choice in repair of stricture is hepaticoduodenostomy, if enough duct is left for accurate anastomosis to the intestine. Localized strictures can be repaired by excision and end-to-end anastomosis.

3. Complete obliterative stricture of the extrahepatic ducts can be repaired by transplantation of a purposely-formed external fistula. While not an ideal procedure in any sense, it gives a fair percentage of cures in an otherwise hopeless condition.

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REFERENCES

1. Judd, E. S.: Ann. Surg. 84:104, 1926.
2. Walters, Waltman: Practice of Surgery, Lewis, Hagerstown, Md. VII, 2:66.
3. Phillips, J. R., and Kilgore, F. H.: Am. J. of Surg., 27:545, 1935.
4. Carter, R. F.: Am. J. of Surg., 30:110, 1935.
5. Elliott, Ellsworth: Ann. Surg., 104:668, 1936.
6. Lahey, Frank H.: Ann. Surg., 105:765, 1937.
7. Walters, Waltman: Proc. Staff Meet., Mayo Clinic, 27:545, 1939.
8. Williams, Hugh, and Smithwick, R. H.: Ann. Surg., 6:942, 1929.
9. St. John, Fordyce B.: Ann. Surg., 6:855, 1926.
10. Russell, Thomas H.: Ann. Surg., 97 I.
11. Lilienthal, Howard: Ann. Surg., 6:765, 1923.
12. Roeder, Clyde A.: Ann. Surg. 1:1, 1930.
13. Lahey, Frank H.: Discussion, Ann. Surg., 4:691, 1936.
14. Walters, Waltman: Proceed. Staff Meet., Mayo Clinic. 21:148, 1930.
15. Wilson, George E.: S. G. & O., 68:288, 1939.

SULFONAMIDE THERAPY: ITS BEGINNINGS IN THE UNITED STATES*

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THE foundations for the current achievements in the chemotherapy of bacterial infections, by the use of sulfonamide derivatives, were laid over a generation ago by Gelmo and Hörlein,¹ while attempting to improve the process of dyeing textiles. In 1908 and 1909 these chemists synthesized several azo dyes containing the sulfonamide radical. At the same time, Gelmo prepared the compound para-amino-benzene sulfonamide, which is now known as sulfanilamide. It is important to note that this compound was never patented.

These important discoveries found no medical application until Morgenroth and Levy, in 1911, synthesized a quinine compound—ethyl hydrocupreine hydrochloride—for the treatment of pneumococcal infections.² Following this lead, and utilizing the methods developed by Gelmo, Heidelberger and Jacobs, at the Rockefeller Institute, in 1917, prepared para-amino-benzene sulfonamide and azo dyes based upon hydrocupreine and hydrocupreidine. It was in this connection that they discovered the bactericidal power of the sulfanilamide radical. To quote: "Many of the substances described in this paper were highly bactericidal *in vitro*, a property which will be described in the appropriate place by our colleague, Dr. Martha Wollstein".³ Unfortunately, Drs. Heidelberger, Jacobs and Wollstein were unable to continue this work. It was not until 1932 that the German Patent office credited Fritz Mietzsch and Joseph Klarer, of the I. G. Farben Industrie, with the synthesis of a series of sulphonamido chrysoidin compounds. The first of these was patented under the name of Prontosil, the hydrochloride of 4'-sulfonamide-2, 4 diamino-azobenzene. Another, "Streptozon," was first used clinically in a staphylococcal infection.⁴ Later, Puschel and Gmelin⁵ reported the use of Prontosil in erysipelas and empyema, which were definitely due to a hemolytic streptococcus. However, up to February, 1935, no animal experiments on Prontosil had been published. At this time, Domagk⁶ reported that Prontosil, when given by mouth, cured fatal hemolytic streptococcal infections in mice and rabbits, and favorably influenced the course of staphylococcal infections in rabbits.

In May, 1935, at a meeting of the French Academy of Sciences, Levaditi and Vaisman⁷ announced that they had confirmed the results of Domagk. Mice, infected with hemolytic streptococci and treated with a preparation "Rubiazol"—the hydrochloride of 4' sulfonamido 2, -4-diaminoazobenzene (Prontosil)—were cured. They remarked that they had been unable to obtain Prontosil from Germany, and that Girard had synthesized the material for them, despite the existence of a French patent which had been granted to the German corporation.

In 1935, M. and Mme. Tréfouël, with Nitti and Bovet (in Paris), discovered that, when these azo-dyes were injected into animals, a cleavage of the azo linkage resulted.⁸ Accordingly, Professor Fournau synthesized para-amino-benzene sulfonamide (1162 F.) and found it to be as efficient as Prontosil in experimental streptococcal infections. This observation demonstrated that the azo linkage was unnecessary for therapeutic effect, and that a relatively simple organic compound was the active agent.

In the fall of 1935, Professor Hörlein lectured on the chemotherapy of bacterial diseases before the Royal Society of Medicine in London. In the discussion, Dr. G. A. H. Buttle, of the Wellcome Laboratory, reported that he had confirmed the chemotherapeutic value of Prontosil in experimental infections of mice. In January, 1936,

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clinical trials with Prontosil and Prontosil-S were begun at Queen Charlotte's Hospital in London on patients suffering from puerperal sepsis, due to *Streptococcus hemolyticus*.⁹

"It is extremely interesting to note," observed Long and Bliss¹ in their book, "The Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds" that "American interest in the new chemotherapeutic compounds lagged well behind that of Europe" . . . "Nevertheless, there were certain American clinicians who were impressed by the reports which they had read in German medical publications, and who tested the effects of Prontosil in the therapy of a few bacterial infections in 1935. Unquestionably, the first use of Prontosil and Prontosil Solution in the United States was by Dr. A. Ashley Weech at the Babies' Hospital in New York, July, 1935, in a patient who was suffering from an infection of the meninges. The drugs were also used in 1935, and early in 1936, by Drs. Alvin F. Coburn (New York City); C. F. Lehman [Williamsport, Pa. (?)]; I. J. Arnsson [Buffalo, N. Y.]; Charles Weiss [Mount Zion Hospital, San Francisco]; and John Staige Davis, Jr. [New York City] in the treatment of various bacterial infections. However, because of the difficulty of obtaining adequate supplies of these preparations, serious laboratory and clinical investigations of these compounds were not initiated in the United States until 1936." (Items in brackets inserted by the author.)

In the preface to their monograph on "Sulfanilamide Therapy of Bacterial Infections," Mellon, Gross and Cooper¹⁰ state, "The sulfanilamide compounds were introduced from abroad into this country, in the treatment of hemolytic streptococcal infections, at nearly the same time by Dr. Perrin Long and associates, and by the authors. One of the contributors of this volume was probably the first patient to be treated in this country—August, 1936; a record of Long's first case being September of that year." It may be of interest to record that the sulfanilamide compounds, P.T. 353 and P.S. 364 (Winthrop Chemical Company) were first used by the present author on the pediatric service of the University of California Hospital on June 6, 1936—several months before the work of Mellon or Long and Bliss. The patient, Jean L. J., a girl aged 11, was admitted on May 14, 1936 with a fever of 105°F., a recent history of scarlet fever followed by an upper respiratory infection and an earache which required paracentesis of the left ear-drum. One week prior to admission, a tooth had been extracted. The blood culture was repeatedly positive for *Streptococcus hemolyticus* (beta). The x-rays showed mastoiditis of the left side, and chronic infection of the left antrum with osteomyelitis of the left malar bone. After failure to influence the course of the disease by injections of immunized human blood, the patient was given, beginning with June 6, 1936, several intramuscular injections of P.T. 364 and tablets (by mouth) of P.T. 353, supplied to us by the Winthrop

Chemical Co. She made an uneventful recovery and was discharged on June 17, 1936.

Several other cases of hemolytic streptococcal infection were treated by us during the summer of 1936, through the coöperation of Drs. J. Sampson, F. I. Harris, E. Shaw and W. Glaser of San Francisco. These were, in all likelihood, among the first in the western hemisphere to receive the benefits of sulfanilamide therapy. The first clinic patient at the Mount Zion Hospital was a male diabetic, suffering from gangrene of a lower extremity. On October 30, 1936, his blood culture was positive for *Streptococcus hemolyticus*. An amputation of the left leg was performed on the following day. The blood culture being still positive, Prontosil was given in repeated doses intramuscularly and by mouth. On the following day, November 2, the blood culture again showed organisms. On the fifth of November, with the continuation of the drug, the blood culture had become negative. On the tenth, it again became positive, since no further treatment had been given due to inavailability of the drug. The patient died on November 12, 1936.

While we did not use the sulfanilamide products until the summer of 1936, we made several efforts to obtain them immediately after publication of the paper by Levaditi and Vaisman.⁷ Our letter to the firm, I. G. Farben Industrie, A. G., Elberfeld, Germany, dated July 1935, was not answered for several months. Finally on January 2, 1936, we received the following reply from the Winthrop Chemical Co.: "At present we do not have supplies of Prontosil in the United States, but we are expecting amounts in the near future. Just as soon as this material is received, we will take care of your requests."

While we succeeded in interesting several Western clinicians in the new sulfonamide compounds, our progress was slow due to skepticism and to inavailability of clinical material. Fortunately, on December 16, 1936, the newspapers announced that a new remedy had cured a sinus infection in the son of President Franklin D. Roosevelt. This changed the entire situation. Sulfanilamide was now urgently in demand, and used not only on the Pacific Coast but throughout the United States.

SUMMARY

A brief history of the development of the sulfonamide compounds is presented. Attention is called to the fact that the Mount Zion Hospital of San Francisco, in collaboration with the Department of Pediatrics of the University of California Hospital, was among the first in the United States to test the therapeutic value of these new remedies.

Mt. Zion Hospital.

REFERENCES

1. Gelmo, P. and Hörlein, H. Quoted from Long, P. H. and Bliss, E. A.: *The Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds*; The Macmillan Company, New York, 1939.

2. Morgenroth, J. and Levy, R.: Chemotherapie der Pneumokokkeninfektion, Berl. Klin. Woch., 48, 1560 (Aug.), 1911.
3. Heidelberger, M. and Jacobs, W. A.: Synthesis in the Cinchona Series, III Azo Dyes Derived from Hydrocupreine and Hydrocupreidine, J. Am. Chem. Soc., 41, 2131 (Oct.), 1919.
4. Foerster (no initials given): Sepsis im Anschluss an Ausgedehnte Periporitis Heilung durch Streptozon, Zentralbl. f. Haut. u. Geschlechtskr., 45, 549, 1933.
5. Puschel, E., Quoted from Long and Bliss (1). Gmelin, L.: Zur Chemotherapie des Erysipelas im Kindesalter, München. Med. Wchnschr., 82, (1)-221 (Feb.), 1935.
6. Domagk, G.: Ein Beitrag zur Chemotherapie der Bakteriellen Infektionen, Deut. Med. Woch., 61, (1)-250, 1935.
7. Levaditi, C. and Vaisman, A.: Chimiothérapie-Action Curative et Préventive du chlorhydrate de 4' Sulfamido-2, 4-diaminoazobenzène dans l'infection, streptococcique expérimentale, C. R. Acad. des. Sci., 200, 1694, 1935.
8. Tréfouël, J. and J., Nitti F. and Bovet, D.: Activité du p-aminophényl-sulfamide sur les Infections Streptococciques Expérimentales de la Souris et du Lapin, C. R. Soc. Biol., 120, 756 (Nov.), 1935.
9. Buttle, G. A. H., Gray, W. H., and Stephenson, D.: Protection of Mice Against Streptococcal and Other Infections by p-Aminobenzenesulphonamide and Related Substances, Lancet, I, 1286 (June 6), 1936.
10. Mellon, R. R., Gross, P. and Cooper, F. B.: Sulfanilamide Therapy of Bacterial Infections, Charles C. Thomas, Springfield, Ill., 1938.

COLON: INDICATIONS FOR INTUBATION DECOMPRESSION IN ITS SURGICAL CONDITIONS*

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THE merit of intubation decompression of distention, as an adjunct to the management of organic and physiologic obstruction of the small intestine, has been definitely established. Many reports have been published concerning the satisfactory results derived through the use of intubation decompression, and in practically every instance mortality rates have been reduced. Thus, this procedure has become one of the fundamental principles in the treatment of nonstrangulating obstruction of the small intestine, and is based upon a thorough understanding of the abnormal physiology involved in the development of distention. Of particular interest is the importance of swallowed air in the process of developing distention. It has been pointed out elsewhere^{1,2} that the recovery from the stomach of swallowed air and liquids halts or retards distention in the presence of obstruction of the small intestine, but that satisfactory decompression is obtained only after adequate intubation has been accomplished.

In the presence of obstruction of the colon there are additional abnormal physiologic factors peculiar to that portion of the intestinal tract. A large amount of gas, chiefly composed of carbon

dioxide, methane, hydrogen, indole, skatole and hydrogen disulphide is formed in the colon and contributes to distention when obstruction occurs. The distending agents then consist of the elements which produce distention of the small intestine, namely, ingested foods, liquids and air, plus the gases generated in the colon as the result of putrefaction and fermentation. In spite of the added distention produced by the gases generated in the colon, it is commonly known that the colon will withstand prolonged obstruction and the subsequent distention for a much longer time than will the obstructed small intestine before devitalization of the bowel wall occurs. This may be explained, in part, by the fact that, because of the nature of the common causes of obstruction of the colon, complete obstruction is usually preceded by weeks

TABLE 1.—Condition of the Small Intestine, in 11 Cases of Obstruction of the Colon

Patient	Diagnosis	Condition of Small Intestine
L. L.	Carcinoma hepatic flexure	X-ray—Marked distention
F. P.	Carcinoma sigmoid	X-ray—Marked distention
M. F.	Perforated diverticulitis sigmoid	X-ray—Marked distention
M. G.	Carcinoma sigmoid	X-ray—Marked distention
M. S.	Perforated diverticulitis sigmoid	X-ray—Marked distention
G. M.	Carcinoma splenic flexure	Marked distention at surgery
M. C.	Carcinoma splenic flexure	Marked distention at surgery
V. K.	Carcinoma hepatic flexure	Moderate distention at surgery
C. S.	Ring adhesion obstruction ileum and ascending colon*	X-ray—Marked distention
W. C.	Perforated diverticulitis sigmoid	No distention
A. P.	Carcinoma of sigmoid	No distention
Number of cases with distention		8 — 81.8%
* This is not considered as straight obstruction of the colon because the ileum was involved in the obstruction.		

Fig. 1.—Table 1.

or months of partial progressive obstruction with resultant hypertrophy of the colon wall. Furthermore, although complete obstruction of the colon has been described by Wangenstein,³ and by Koucky and Beck,⁴ as a closed loop obstruction on the basis of "the invariable competence of the ileocecal valve," it has been our observation that the ileocecal valve is not invariably competent. In a review of the records of eleven patients with complete obstruction of the colon, the scout roentgenograms of each abdomen showed marked gaseous distention of the small intestine in five patients, and in three additional patients of whom scout films were not made, gaseous distention of the ileum was noted at the time of surgery when external decompression operations were performed. (Chart 1.) Therefore, 81.8 per cent of this small group of patients with complete obstruction of the colon from various causes had dilatation of the small intestine. It may be significant

* Presented in part at the Inaugural Meeting of the Southern California Chapter of the American College of Surgeons, October 9-10, 1941, Los Angeles, California.

that of the three fatalities, two did not have distention of the small intestine. Whether the distention of the small intestine develops because of incompetence of the ileocecal valve, or because of a secondary ileus, is probably of little importance.

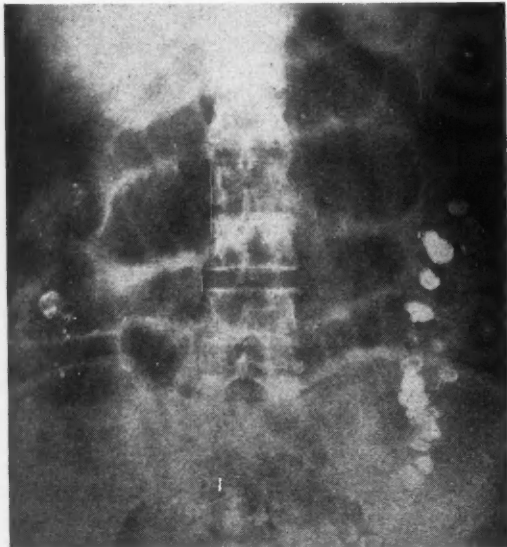


Fig. 2.—Case 1. Scout film.

When intubation therapy is contemplated for relief of generalized intestinal distention secondary to colonic obstruction, the important points to be remembered are that the distending small intestine relieves the tension within the colon, and that the agents producing the distention are placed within the reach of the Miller-Abbott tube. It is in the stage of progressive, generalized distention with dehydration and chemical imbalance, that we are frequently called upon to treat patients with complete obstruction of the colon. These changes, occurring as they frequently do in elderly patients, augment the risk of any type of external decompression operation including immediate cecostomy.

Although cecostomy or colostomy is a necessary procedure in many of these patients, it has become our practice to carry out intubation decompression prior to operation if there is distention of the small bowel. During this time the water and chemical deficiencies are corrected by intravenous and subcutaneous fluids, and blood transfusions, if they are indicated. From two to five days may be required to carry out this program, but the reduction in distention, the subsidence of fever and leucocytosis, and the general improvement of the patient more than justify the delay. Furthermore, it is not uncommon that what appears to be a complete obstruction of the colon will subside partially or completely following satisfactory decompression of the distention of the small intestine. Although upon several occasions the tube has been demonstrated by x-ray to have

entered the cecum, the application of this procedure to colonic obstruction is not necessarily based upon the possibility of direct decompression of the large bowel, but upon the indirect effect obtained by decompression of, and prevention of distention of the small intestine. The following case of inflammatory obstruction of the colon, with an associated involvement of the small intestine, responded very satisfactorily to intubation decompression.

REPORT OF CASE

CASE 1.—A 64-year-old white woman was admitted to St. Vincent's Hospital on September 12, 1941, because of abdominal pain and distention of seven days' duration. The pain began in the left lower abdomen, but had become generalized and colicky after several doses of milk of magnesia which did not cause the bowels to move. The patient had vomited frequently and had taken practically no nourishment. A partial barium enema, given before the patient was in our care, had been incompletely expelled with some fecal particles and small amounts of gas. Sufficient barium had been retained to outline multiple diverticula of the entire descending colon and the cecum.

The patient was a well-developed, well-nourished woman who was dehydrated and obviously very ill. The systolic blood pressure was 140 and the diastolic was 80 mm. of mercury. The temperature was 101.4, pulse 96. Examination of the heart and lungs revealed no abnormalities. The abdomen was rotundly distended, tense but



Fig. 3.—Case 1. Scout film showing decompression.

not rigid, and generally tender. There was a tender, indurated mass in the left lower abdomen. Infrequent and sluggish peristalsis could be heard, and during the peristalsis there were metallic tinkles and the sounds of fluid within the distended bowel. By digital examination of

the rectum, tender induration was palpated high on the left side. The blood contained 13.9 grams of hemoglobin, 4,360,000 erythrocytes and 15,850 leucocytes per 100 cc., with 12 per cent lymphocytes, 4 per cent large mononuclear cells and 84 per cent neutrophils. A scout roentgenogram of the abdomen showed very extensive distention of the small intestine and gaseous distention of the right half of the colon.

necessary to discontinue attempted intubation and proceed with the operation of cecostomy, as was done in the following case.

CASE 2.—A woman, 55 years of age, was seen in consultation at St. Vincent's Hospital on May 22, 1940, because of marked abdominal distention with gas and barium



Fig. 4.—Case 2. Complete obstruction of the sigmoid by carcinoma; scout film four days after barium meal.



Fig. 5.—Patient L.L. Complete obstruction of the hepatic flexure by carcinoma; scout film.



Fig. 6.—Patient F.P. Complete obstruction of the sigmoid; scout film.

A Miller-Abbott tube was passed and placed in a satisfactory position in the stomach, and fourteen hours later a scout roentgenogram revealed the tip of the tube to be in the jejunum, with marked decompression at this early time. Decompression was progressive and was complete as demonstrated by a film made four-and-one-half days after the tube was introduced. There was a corresponding subsidence of fever with leucocytosis; on September 17 the temperature was 99 and the total leucocyte count was 8700. Although bowel function had been resumed, the diverticula still retained barium seven days after the patient was admitted to the hospital. The tube which had been clamped off for four days during which time the patient remained fever-free and without abdominal distention, was removed on September 22, 1941. The left lower abdominal mass was subsiding. However, the patient remained in the hospital chiefly as a matter of convenience until October 2, 1941. At the present time the bowel function is normal. The patient has very extensive diverticulosis, and it is impossible to say when recurrent diverticulitis and obstruction may occur, but she is infinitely happier now than she would be with a colostomy.

If difficulty is encountered in passing the tube, or if the response to decompression is not satisfactory, the patient is carefully observed. Especially important are the observations of increased temperature and pulse rate, increased abdominal distention, increased tenderness and decreased peristalsis. The character of the vomitus, or the returns through the tube are observed; but it should be noted here that no case of intestinal obstruction under observation should be allowed to remain untreated until fecal vomiting occurs. True, fecal vomiting is not a diagnostic symptom of obstruction, but it is a symptom characteristic of the terminal phase of intestinal obstruction. In order to avoid this phase of obstruction, it is

in the colon and small intestine. The history consisted chiefly of increasing constipation, with blood and mucus in the stools, and weight loss of forty-seven pounds in the past ten months. Five months previously a barium enema and proctoscopic examination had been reported to be negative. On May 17, 1940, a barium meal had been given. The six-hour film showed the bulk of the meal to be in the cecum and terminal ileum. The patient had no further bowel movement after the barium was given, and she was admitted to the hospital on May 21, 1940, with complete obstruction of four days' duration. The scout roentgenogram of the abdomen showed barium and gaseous distention of the small and large bowel. When the patient was seen on May 22, 1940, a Miller-Abbott tube was passed in the hope of reducing the distention of the small intestine. Difficulty was encountered in passing the tube beyond the pylorus, and on the morning of May 24, 1940, there was increased abdominal pain with generalized tenderness. The temperature was 102.4 and the pulse rate 110; therefore attempted intubation was discontinued and a cecostomy was made. On June 12, 1940, after satisfactory decompression and evacuation of the barium through the colostomy, the patient was operated upon by Dr. Verne C. Hunt, who found a carcinoma of the sigmoid.

COMMENT

This case demonstrates the danger of the barium meal, or routine gastrointestinal x-ray examination for known or suspected partial obstruction of the colon. Rankin and Graham⁵ described the opaque oral meal as a positive menace in the presence of an obstructing lesion of the colon. The barium suspension may not pass the obstruction, the heavy salt precipitates form the suspension and practically constitute a barium impaction. There is, of course, no hope of recovering such an impaction by intubation. We have encountered such solid masses of

barium in the colon, following the hasty oral administration of barium given elsewhere, that several days of irrigation were required to dislodge the masses after a cecostomy was made. There is no doubt that this heavy precipitate in the colon adds to the surgical risk.

One must consider two barriers in the process of intubation decompression for obstruction of the colon. The first is the pylorus, an anatomic barrier present in all cases of intubation, and the second is the competent ileocecal valve, a physiologic barrier, present in only a small per cent of colonic obstructions. It is impossible to formulate definite rules or to describe a definite technic for surmounting the first barrier. Adherence to the principle of early treatment of intestinal obstruction, by carrying out intubation before the abdominal distention becomes pronounced, will facilitate the passage of the tube through the pylorus, and will allow for the time necessary for the procedure. An individual who is familiar with the various methods of intubation must take full responsibility, and must be prepared to spend the time necessary for the procedure and for close observation of the patient. Too often the surgeon, who may be familiar with the principles but not the practice of intubation, is satisfied with the half-hearted, inefficient attempts of the inexperienced members of the house staff. A physician once asked me to show him how to attach the balloon so that he might attempt intubation of a patient upon whom a diagnosis of postoperative intestinal obstruction had been made. Such inexperi-

barrier to intubation as applied to obstruction of the colon, has been found competent in only a limited number of cases. This can be determined best by the scout roentgenogram of the abdomen. I should say at the present time that if the small intestine contains an appreciable amount of gas demonstrating that the ileocecal valve is incompetent, one can advantageously use the Miller-Abbott tube in the preoperative preparation of the patient with obstruction of the colon. Adequate intubation decompression may obviate an external decompression operation in some circumstances, and in all instances decompression and the reestablishment of fluid, electrolyte and serum-protein balance will materially reduce the risk of the operation. However, in complete obstruction of the colon, if the scout roentgenogram shows the closed loop type of obstruction, an early external decompression operation will avert the hazards which ensue from prolonged unrelieved distention.

Whipple¹⁰ has emphasized the importance of avoiding postoperative distention following intestinal anastomosis. He reported 36 resections of the colon in which the Miller-Abbott tube was used preoperatively and postoperatively, with but one death in the series, a mortality rate of 2.8 per cent. In our experience, when intubation has been used preoperatively and the tube has been left in at the time of surgery, we have not observed that it has interfered with the administration of inhalation anesthesia. If the tube has not been employed in the preoperative preparation, it has



Fig. 7.—Patient C.S. Ring adhesion obstruction ileum and ascending colon. Barium enema made elsewhere.



Fig. 8.—Patient C.S. Scout film at the time the patient came under our care.

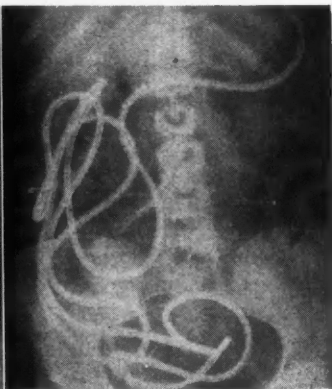


Fig. 9.—Patient C.S. Scout film showing the decompression prior to surgery.

ence predicts a high percentage of failures, invites complications and is responsible for the disregard which some physicians hold for intubation. The various technics have been thoroughly described in literature.^{6, 7, 8, 9} In my experience the position of the tube in the stomach is all-important. The tube must be made to follow the curvature of the stomach and the tip must present at the pylorus. Contrary to opinions generally expressed in literature, the ileocecal valve, which is the second

become our practice to carry out intubation almost routinely as a postoperative measure in practically all cases of intestinal resection and perforated appendicitis. In one case of resection of the terminal ileum and the cecum for extensive tuberculosis in which there was some distention of the ileum, intubation was thought to be of sufficient importance that the tube was passed and manually threaded into the small intestine while the abdomen was open. In one case the tube was

passed into the cecum at operation. Four days later the patient developed progressive silent abdominal distention characteristic of ileus. Withdrawal of the tip of the tube into the small intestine was productive of a large amount of gas and liquid small-bowel content, and was followed by complete subsidence of symptoms. Thus the tube provides an aseptic enterostomy which may be used at will. Suction is maintained until it seems highly probable that normal intestinal activity will be resumed. The tube is then clamped off, but left in until bowel activity has definitely returned to normal without the development of distention. We agree with Whipple, that the pre-operative and postoperative use of the Miller-Abbott tube adds to the safety and comfort of patients undergoing operations upon the colon.

SUMMARY

It has been demonstrated that distention of the small intestine existed in 81.8 per cent of a small group of cases of obstruction of the colon from various causes. This would indicate that the ileocecal valve is incompetent in those cases of obstruction of the colon having an associated appreciable distention of the small intestine. Intubation decompression is indicated in the pre-operative preparation of patients with obstruction of the colon, if the scout roentgenogram of the abdomen reveals distention of the small intestine, demonstrating that the valve is incompetent. Although the tube may enter the colon, satisfactory decompression may be accomplished by intubation down to the ileocecal valve. Following intestinal anastomosis and operation for perforated appendicitis, the use of the Miller-Abbott tube will materially reduce morbidity and mortality. The necessity for intubation decompression usually denotes a serious existing condition. Only a surgeon who is familiar with all phases of intestinal obstruction and with the various technics and dangers of intubation as well as with the alternatives when intubation is unsuccessful, should assume full responsibility.

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REFERENCES

1. Wangenstein, Owen H., and Rae, Charles E.: The Distention Factor in Simple Intestinal Obstruction. An Experimental Study with Exclusion of Swallowed Air by Cervical Esophagostomy, *Surg.*, 5:327-339, 1939.
2. Bennett, Louis C.: Intubation Management of Distention in Intestinal Obstruction, *West. J. Surg.*, 49:71-76, 1941.
3. Wangenstein, Owen H.: The Therapeutic Problem in Bowel Obstruction, *Pub.*, Charles C. Thomas, Springfield, Ill., 1937.
4. Koucky, John D., and Beck, William C.: Timing Operative Intervention for Acute Intestinal Obstruction, *Arch. Surg.*, 42:581-597, 1941.
5. Rankin, Fred W., and Graham, A. Stephen: Cancer of the Colon and Rectum, *Pub.*, Charles C. Thomas, Springfield, Ill., 1939.
6. Abbott, W. Osler, and Johnston, Charles G.: Intubation Studies of the Human Small Intestine; A Non-surgical Method of Treating, Localizing and Diagnosing the Nature of Obstructive Lesions, *Surg., Gynec. and Obst.*, 66:691-697, 1938.
7. Johnston, Charles G.: Decompression in the Treatment of Intestinal Obstruction, *Surg., Gynec. and Obst.*, 70:365-369, 1940.
8. Leigh, Octa C., Jr., Nelson, John A., and Swenson, Paul C.: The Miller-Abbott Tube as an Adjunct to Surgery of Small Intestinal Obstructions, *Ann. Surg.*, 111:186-212, 1940.
9. Bennett, Louis C.: Tube Decompression in Intestinal Obstruction, *Southwestern Med.*, 24:152-157, 1940.
10. Whipple, Allen O.: The Use of the Miller-Abbott Tube in the Surgery of the Large Bowel, *Surg.*, 8:289-293, 1940.

URETERAL SPLINT: SOME EXPERIENCES WITH ITS USE*

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THE ureteral splint is indicated in many operations for the surgical removal of upper urinary tract calculi, and in operations for the correction of hydronephrosis and pyonephrosis. It is used to promote free drainage from kidney to the bladder, after all obstructions have been corrected. The ureteral splint must be of proper size and correctly inserted.

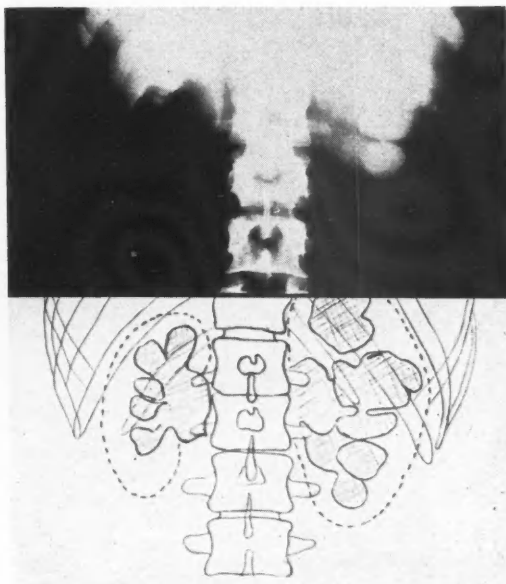


Fig. 3.—Bilateral pyonephrosis in a 19 years old girl.

I will now present some brief case histories with pictures illustrating some experiences with the splint.

REPORT OF CASES

CASE 1.—Mr. J. A., age 30, was seen October 3, 1940, complaining of intermittent attacks of sharp, stabbing pain in the left flank, radiating to the left groin. At cystoscopy, a calculus

* Read before the Section on Urology at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

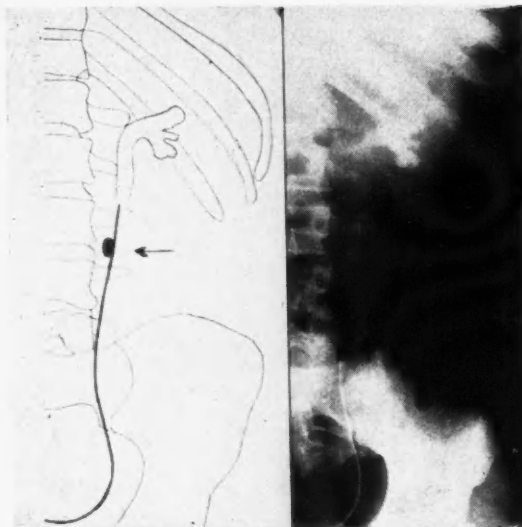


Fig. 1.—Catheter was inserted up ureter, beyond calculus and as far as it would go. Note incomplete filling of upper calyces.

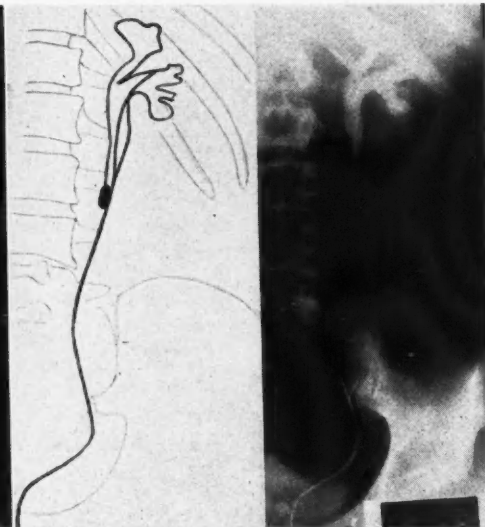


Fig. 2.—Intravenous urography taken 24 hours after Fig. 1. The ureteral catheter has migrated up the ureter, and into the pelvis.

was found in the upper third of the left ureter, and the ureteral catheter was inserted in the ureter as far above the calculus as it would go. (See Fig. 1.) Because of incomplete filling of the calyces in the upper third of the kidney, the patient was given skiodan intravenously the following day, and you will see in (Fig. 2.) that the ureteral catheter has migrated up the ureter and well into the kidney pelvis. Catheters left in the ureter for drainage have a tendency to be expelled downward through the ureter; but in this case the catheter has migrated upward into the kidney pelvis. This upward migration of the catheter is not explained.

CASE 2.—Mrs. R. Y., age 19, was first seen in September, 1939, complaining of an acute cystitis. At cystoscopy a bilateral pyonephrosis was found. (See Fig. 3.) A plastic operation was performed on the pelvo-ureteral junction of the right kidney,

and a No. 24 Pezzar catheter, with a No. 8 ureteral extension, was inserted for kidney pelvis drainage as well as for a ureteral splint. One week later skiodan was injected intravenously (See Fig. 4) which shows that the ureteral extension has come out of the ureter and is coiled up in the pelvis. I have had this experience in two other cases, when using this type of drainage catheter with the ureteral extension.

CASE 3.—Mrs. H. S., age 46, was seen in October, 1940, after she had had three acute attacks of left renal colic. An intravenous urography showed a calculus in the upper part of the midportion of the left ureter. (See Fig. 5.) At surgery, the calculus was removed from the ureter, following which a straight nephrostomy tube was inserted through the parenchyma of the of the kidney into the pelvis, and a large No. 11 Whistle-

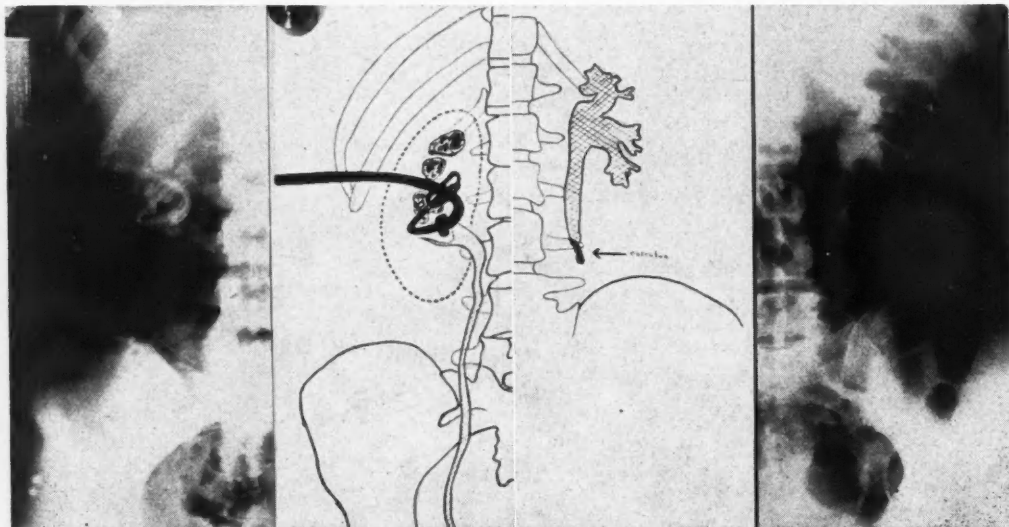


Fig. 4.—A plastic operation was done on the right pelvo-ureteral junction at which time a No. 24 Pezzar catheter, with a No. 8 ureteral extension, was inserted into the kidney and ureter respectively. This picture was taken one week after surgery, and shows the ureteral extension, which was originally placed down the ureter, now coiled up in the pelvis.

Fig. 5.—Large calculus in upper part of the mid-portion of the left ureter.

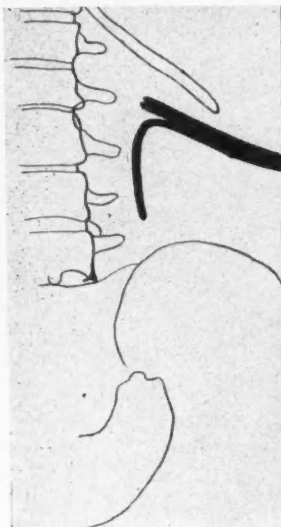


Fig. 6.—This case is same as Fig. 5, showing nephrostomy tube and large No. 11 ureteral catheter, which has been inserted through the nephrostomy opening and down the ureter a short distance.

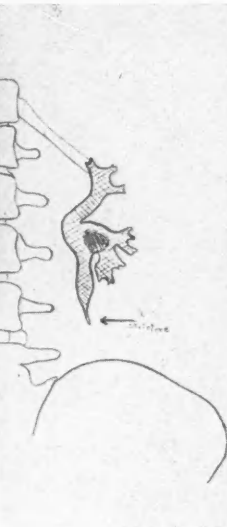


Fig. 7.—This case shows a stricture in the upper third of the ureter, which is the end result of the ureteral splint used in Fig. 6.



tipped catheter was inserted through the nephrostomy opening and down the ureter for a short distance. (See Fig. 6.) In two weeks the nephrostomy tube and ureteral catheter were removed, and one week later skiodan was given intravenously. (See Fig. 7.) This picture shows a stricture in the upper third of the ureter, which was caused by pressure from the end of the large catheter in the ureteral lumen. This stricture required several dilations before the nephrostomy sinus would heal.

1 1 1

CASE 4.—J. G. age 34, entered the hospital in January, 1941, complaining of severe pain in the left flank associated with chills and fever. At cystoscopy a large calculus was found in the upper end of the left ureter, and the ureteral catheter was left in situ for drainage. (See Fig. 8.) At surgery the calculus was removed from the ureter. A nephrostomy tube was inserted and a No. 7 x-ray ureteral catheter was passed through the nephrostomy opening, down the ureter and into the bladder. (See Fig. 9.) After ten days the ureteral catheter was removed, and a pyeloureterogram was made by injecting sodium iodine solution

through the nephrostomy tube. (See Fig. 10.) It shows normal kidney pelvis, calyces, and ureter. Two weeks later the patient was given skiodan intravenously, which shows a normal functioning kidney and ureter. (See Fig. 11.)

COMMENT

The experiences above quoted have illustrated the importance of the proper application of the ureteral splint. Complications of the faulty use of the splint will not be determined, unless follow-up pyelograms are made. It is important that all perirenal and periureteral adhesions be removed before the splint is applied. All congenital anomalies such as: anomalous vessels, faulty inser-

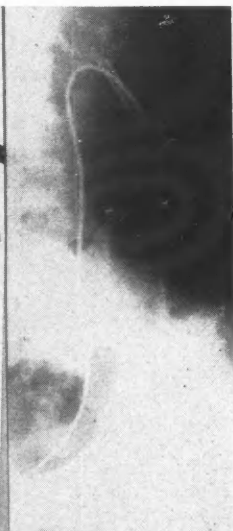
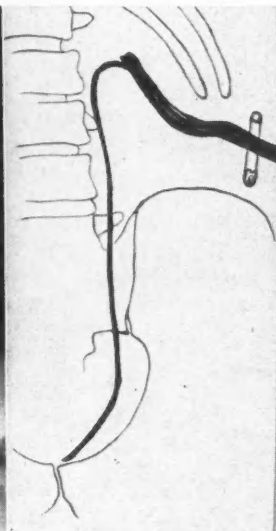
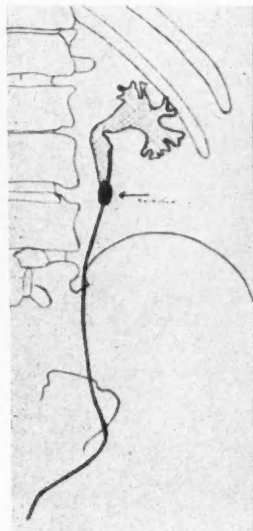


Fig. 8.—Pyelogram, showing large calculus in upper third of left ureter.

Fig. 9.—This illustrates the nephrostomy tube and an x-ray ureteral catheter used as a splint, and extending well down the ureter. This case is the same as in Fig. 8.

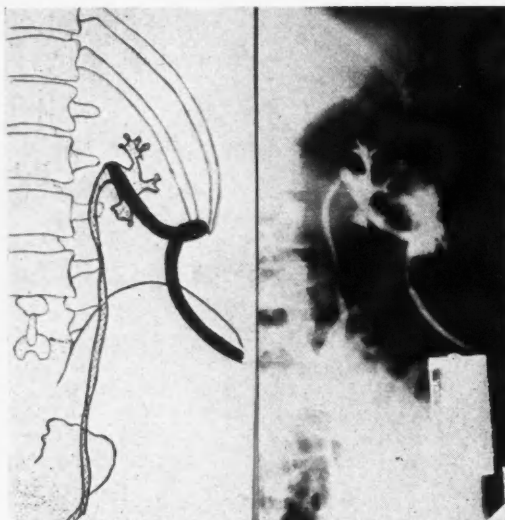


Fig. 10.—This is the same as Figures 8 and 9 showing the pyeloureterogram made by injecting sodium iodine solution through the nephrostomy tube.

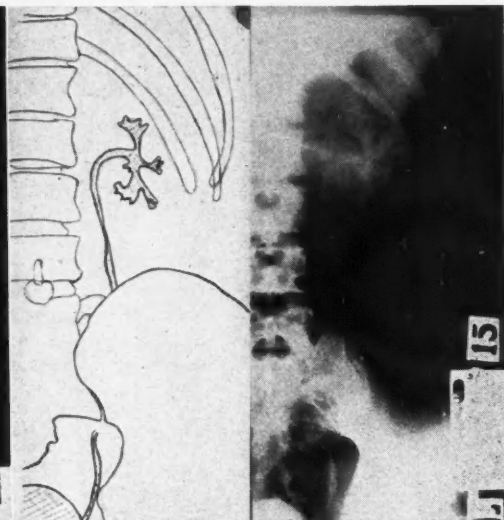


Fig. 11.—This is an intravenous urography of Fig. 8, showing normal functioning kidney and ureter.

tion of the ureter to the pelvis, stenosis of the pelvo-ureteral junction, and strictures of the ureter, must be corrected. In other words, anything that interferes with the free drainage of urine from kidney to the bladder must be corrected before the splint is applied.

It is my opinion that the ureteral splint should be an x-ray ureteral catheter, the diameter of which should not be larger than the caliber of the ureter; that, when possible, it should be inserted through the nephrostomy opening and anchored at its upper end, and that it should extend well down the ureter.

For additional comment, I refer you to Thomas Gibson's original article "The Ureteral Splint,"

which he presented before the Western Section Meeting of the American Urological Association in April, 1939.

CONCLUSIONS

1. Cases are presented showing faulty application of the ureteral splint.
2. An x-ray ureteral catheter is used, and should not be larger in diameter than the lumen of the ureter.
3. The ureteral catheter should extend well down the ureter.
4. The ureteral splint can be successful only when all obstructions to the outflow of urine from the kidney to the bladder have been corrected.

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MACROCYTIC ANEMIA IN LIVER DISEASE*

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DURING the past several years the work of a number of investigators has made it obvious that the so-called pernicious anemia blood picture is not a pathognomonic sign of one disease, but a type of faulty blood formation. Whatever disease process is able to produce the disturbance in hematopoiesis will produce the blood picture. Among the diseases in which this condition has been described are pernicious anemia itself, sprue, tropical macrocytic anemia, macrocytic anemia of

pregnant women, nutritional deficiency, various lesions of the G-I tract, certain cases of hemolytic jaundice, and certain diseases of the liver. These conditions all result in the same type of underlying process; defective blood formation, in which there is a failure of maturation of the cells of the red corpuscle series. In pernicious anemia this is often carried out to an extreme extent. In liver disease it is usually much more mild. However, with the same degree of anemia it is extremely difficult, if not impossible, to distinguish between the two blood pictures.

There is general agreement among investigators^{1,2,3,4,5} on several aspects of the anemia of liver disease. The macrocytosis affects the great majority of the red corpuscles, which show relatively little variation in size or shape. This appearance is strikingly like that of mild pernicious anemia. Nucleated red cells are uncommon. The

* Read before the Section on General Medicine at the seventh Annual session of the California Medical Association, Del Monte, May 5-8, 1941.

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fragility of the erythrocytes is normal. Spontaneous remissions and relapses of the anemia may occur. There is no relationship between the concentration of the bilirubin in the serum and the size of the red blood cells. On the whole the degree of macrocytosis seems to vary with the degree of anemia.

There is considerable disagreement about the percentage of patients with liver disease who have macrocytosis. Part of this is due to the criteria and classification of the conditions involved, and part to the methods used. On one condition alone, Laennec's cirrhosis, the more recent figures vary from 41 per cent³ to 90 per cent.⁴

In his entire series of 132 patients, Wintrobe⁵ classified 23 per cent without anemia, 33 per cent with macrocytic anemia, 30 per cent with normocytic anemia, 2 per cent with simple microcytic anemia and 12 per cent with hypochromic, microcytic anemia. The last named type of anemia was attributed, in most instances, to chronic loss of blood, (being found in cirrhosis only, when there was associated hemorrhage).

Spontaneous remissions in the anemia, and return of the size of the cells toward the normal may occur during the course of liver disease. This may not be necessarily correlated with the trend of the rest of the condition. Some cases of macrocytic anemia, particularly those with a low red-blood count, respond well to the injection of the pernicious anemia fraction of liver extract. Some

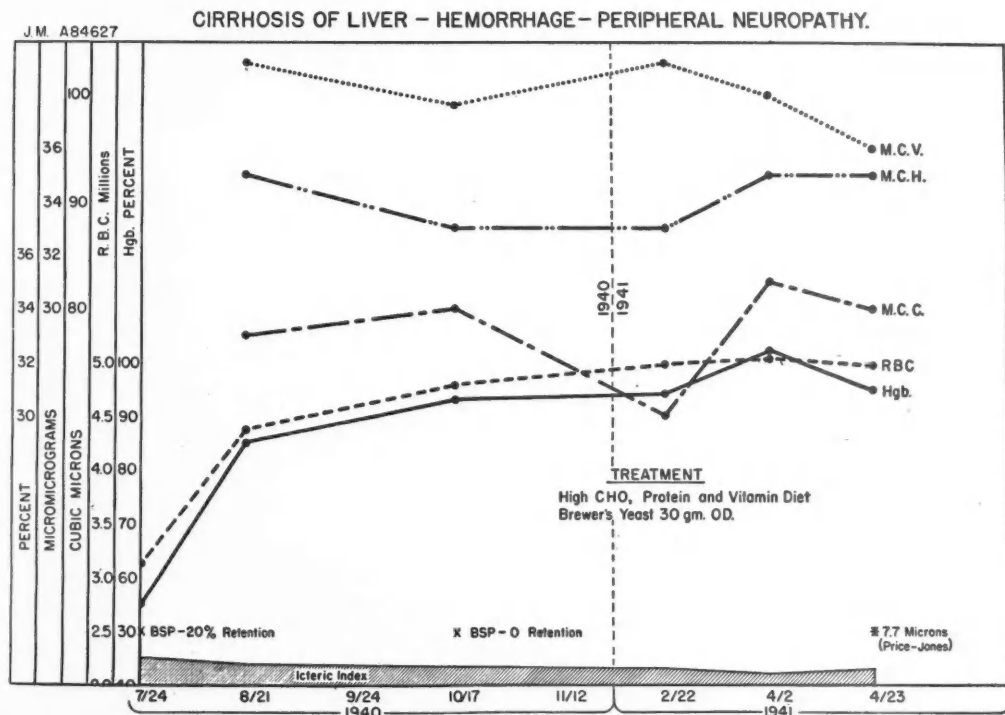
respond to therapy with preparations of yeast. Others do not seem to yield to either type of treatment.

DETERMINATION OF KINDS OF ANAEMIA

The methods which may be used for the determination of the kind of anemia present include: (1) The determination of the color index. In macrocytic anemia this is near, or over 1. (2) The direct measurement of the cells by the method of Price-Jones, or by refraction.^{1,2} By definition⁶ a macrocytic anemia may be said to be one in which there is an increase in the number of red-blood cells of the circulating blood having a diameter greater than 7.5 microns. (3) The determination of the mean corpuscular volume (MCV)^{1,2} which is found by dividing the hematocrit or packed red-cell volume by the number of red cells. The normal MCV ranges between 86 and 94 cubic microns. An MCV of 96 or greater may be said to be macrocytosis.

The methods used in this study were the determination of hemoglobin, red-blood cells, color index, packed cell volume, mean corpuscular volume, mean corpuscular hemoglobin content and mean corpuscular hemoglobin concentration, with occasional checking of the results by means of Price-Jones curves.

The use of volume determinations is superior to other methods of measurement for our purposes. They magnify the differences between the



THE PERSISTENCE OF MACROCYTOSIS AND HYPERCHROMIA WITH NORMAL Hgb AND ERYTHROCYTE VALUES AND CLINICAL WELL BEING.

Fig. 1.—Blood values in a case of cirrhosis of the liver under treatment.

abnormal and the normal cells, and give figures which seem quite accurate and which check closely with measurements obtained by the Price-Jones method on the same blood. They are made particularly valuable in liver disease by the fact that the cells show comparatively little variation in size or shape, but are uniformly moderately large. These lesser degrees of cell enlargement are most readily detected by volumetric measurements.

CLINICAL MATERIAL FOR THIS STUDY

A selected group of cases with liver disease have been followed at the Stanford University Out-Patient Department during the past two years. (Table I.) Included in this group were sixteen patients with Laennec's cirrhosis, and eleven patients who had had acute hepatitis of varying degrees of severity. Practically all of them had been in the hospital (San Francisco Hospital or Stanford) prior to being seen in the clinic.

None of these cases had hemoglobin determinations under 70 per cent. The lowest was 74 per cent (12.5 gm.) in a case of cirrhosis, the highest 102 per cent (17.5 gm.) in a patient with convalescent hepatitis. All had received some degree of treatment, in a few no more than a well-balanced diet, in most a high carbohydrate, protein and vitamin diet, and twenty to forty grams of brewers' yeast daily, with additional liver extract and vitamins in some. The values obtained in this series, then, represent to a certain extent values obtained in cases with liver disease while under treatment, rather than initial values.

Only one of the eleven patients who had had acute hepatitis had cells within the limits of normal, while four of the sixteen with cirrhosis showed this phenomenon. This makes a total of 22 out of the 27 cases, or 82 per cent with macrocytosis.

The range of values for the mean corpuscular volume was 86 to 111 cubic microns in the acute hepatitis patients, and 80 to 115 in the cirrhosis cases, an average of 101.9 cubic microns in the former, and 97.8 in the latter. The average mean corpuscular volume for the entire group was 99 cubic microns. Most of the individual values were consistently near this average value, and most of the cells in the cases measured by the Price-Jones procedure were remarkable for their lack of

variation. The mean hemoglobin content of the red corpuscles was 34 micromicrograms in the hepatitis cases and 32 in those with cirrhosis, averaging 33 micromicrograms for the entire group. The concentration of hemoglobin in the cells averaged 33 per cent which is within the range of normal values. The blood values, then, consistently reveal cells larger than normal and well filled with hemoglobin.

These patients have been treated by rest, abstinence from alcohol, diet high in carbohydrate, protein and vitamin content and low in fat (Carbohydrate 500 grams, Protein 100 grams, Fat 25 grams) and brewers' yeast, 20 to 30 grams daily. A few received liver extract or a syrup rich in Vitamin B complex. In most of those with symptoms there has been continued clinical improvement. In general the values for hemoglobin and erythrocytes have increased towards higher normal figures. In some there has been a regression in the size of the cells towards normocytosis, but in others this has not occurred, while the patient was improving clinically. In others there has been a change from normocytosis to macrocytosis. One patient, whose blood was obtained two years after an attack of catarrhal jaundice, had a mean corpuscular volume of 110 cubic microns without any other laboratory or clinical evidence of disease. The number of observations recorded is very small as yet, but it would appear that macrocytosis may remain long after other evidence of liver disease has disappeared.

One case is cited as an example (Figure 2):

REPORT OF CASE

J. M. is a 35-year-old white woman, who had been addicted to large amounts of alcohol for several years. Hematemesis during a drinking bout resulted in her hospitalization. She had a large, hard, slightly tender liver, spider hemangiomas, peripheral neuropathy and anemia. The hemoglobin was 55 per cent (S), the red-blood count 3,130,000 with a color index of .9. There was abnormal retention of bromsulphalein (20 per cent at the end of an hour, 5 mg. per kilogram of body weight being injected). She was first seen in the clinic a month later, having shown considerable improvement. The hemoglobin had risen to 85 per cent (14.6 gm.), the red-blood cells to 4,360,000. The color index had risen to .97. The mean corpuscular volume was 103 cubic microns, the mean corpuscular hemoglobin content 35 micromicrograms, and the concentration 33 per cent. Since that time she has continued to do well. For the past six months she has been in excellent general condition clinically. She

TABLE 1.—Incidence of Macrocytosis and Hyperchromia in 27 Cases of Liver Disease.

	Hgb. gms.	RBC Mill.	Normo- cytosis	MCV		MCH	MCC
				MCV Range	Cu. Mic. Average	Mic. Mic. Average	% Average
Acute Hepatitis, Average of 11, (2 mos. 2 yrs. after)	13.4 to 17.5	3.56 to 5.36	1 of 11	86- 111	101.9	34	34
Cirrhosis of Liver, average of 16 (treated)	12.5 to 16.1	3.88 to 5.04	4 of 16	80- 115	97.8	32	33
Total Liver Disease, average of 27 cases			5 of 27	80- 115	99.0	33	33

has slight residual numbness and impaired vibration sense in the right foot. Her liver is still palpable; she still exhibits hemangiomas. Her hemoglobin and red-blood count have been maintained at high normal values. She has no retention of bromsulphalein dye. Her corpuscular volume and hemoglobin content reveal persistent macrocytosis and hyperchromia.

ETIOLOGY

There is general acceptance of the primary etiologic factors which may lead to macrocytic anemia. According to Castle,⁹ an as yet unidentified substance, called the "extrinsic factor," is ingested in the food; this reacts in the stomach with the "intrinsic factor" which is contained in the gastric secretion. The product so formed is absorbed from the intestine; it passes through and is modified by and stored in the liver. It then is utilized by the bone marrow as it is needed. This is the substance which is necessary for the maturation of normal red-blood cells. Any interference in this chain of events results in macrocytic anemia.

It has usually been assumed that when damage to the liver becomes extensive, there is interference with the storage process; when this goes on sufficiently long, so that there is exhaustion of the hematopoietic principle already present, macrocytic anemia results. Two conditions seem necessary in this regard: first, that the damage be widespread, and second, that it persist for some time. It does not necessarily have to be severe according to my personal experience, although Wintrobe⁸ states it occurred in those cases in which "damage was particularly great and extensively distributed."

Extracts from the livers of patients dying of cirrhosis of the liver, and exhibiting macrocytic anemia, have been injected into patients with pernicious anemia. The results have been at variance. By some investigators¹⁰ no evidence of the hematopoietic substance was found. By others¹¹ good reticulocytosis and response in the hemoglobin and red-blood count were demonstrated. These studies indicate that macrocytic anemia in liver disease must, in some instances at least, be due to causes other than an inability of the liver to store the hematopoietic principle.

The classical type of anemia produced by faulty nutrition is the hypochromic microcytic anemia of iron deficiency. It has been repeatedly demonstrated that macrocytic anemia may be produced by defective diet over a prolonged period.^{12,13} Remissions may be sustained in such patients by means of diet alone.

RELATION TO DISEASES OF NUTRITIONAL ORIGIN

Macrocytic anemia has recently been reported in a number of different types of disease of nutritional origin. Wills and Evans¹⁴ described a pernicious anemia-like blood picture in a disease which they termed tropical macrocytic anemia; treatment with crude yeast and liver extracts produced remission, but the highly-purified fractions effective in pernicious anemia did not. They postulated the existence of another hematopoietic

factor besides the extrinsic pernicious anemia principle. They were able to produce anemia in monkeys fed a deficient diet, and to obtain similar results in the therapy of this condition.¹⁵ Macrocytic anemia has been reported in pregnancy.^{16,17,18} Elsom and Sample¹⁹ produced it in pregnant women by a diet insufficient in Vitamin B, finding that other clinical evidence of Vitamin B deficiency appeared coincident with the advent of macrocytic anemia. When yeast or liver extract was given, all symptoms disappeared and the blood values returned to normal. Bianco and Jolliffe²⁰ studied the blood of alcoholic addicts with and without complications which included peripheral neuropathy, pellagra, encephalopathy and cirrhosis. No anemia was noted in the cases without complications, while anemia was found in 61 per cent of those with other diseases. However, in 50 per cent of both groups macrocytosis occurred. Sydenstricker and his collaborators²¹ found that commercial liver extract improved patients with both pernicious anemia and pellagra, (although it did not raise the blood count in the latter disease). A similarly-prepared extract from the liver of a patient who had died with severe untreated pellagra was administered to a patient with pernicious anemia, with satisfactory results. However, it did not affect two pellagrins who were later brought into a remission by the use of commercial liver extract. Cirrhosis of the liver²² very often, and other diseases of the liver not infrequently, are associated with deficiency diseases. It may be that the mechanism of the macrocytosis, as well as that of the anemia, are related in the two conditions. In both the difficulty may lie in the failure to obtain sufficient amount of an extrinsic substance separate from the anti-pernicious anemia principle or in the inability to utilize it or both. The irregularity of response to apparently adequate doses of liver extract is further evidence that the macrocytic anemia of liver disease may not be caused by a simple lack of storage of the anti-pernicious anemia substance.

The observations presented here, that macrocytosis may persist long after a patient is clinically well and the blood is otherwise normal, are against the view that it is due entirely to an extrinsic deficiency,¹⁵ and indicate that it may be the result of a defect in the ability of a once damaged liver to synthesize the substance necessary for maturation of blood.

SUMMARY

In liver disease there is generally a macrocytic type of anemia which is mild in degree.

The macrocytosis frequently persists in spite of treatment, and in spite of the return to normal of the general well being, the hemoglobin and the red-blood count of the patient. The cells remain consistently large and well-filled with hemoglobin.

The explanation of the macrocytic anemia as a simple failure of storage in the diseased liver of the hematopoietic substance seems inadequate. It is suggested that the phenomenon is partly the result of an extrinsic deficiency, partly the result of

an inability of the liver to synthesize the maturation factor.

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REFERENCES

1. Cheney, G.: *California & West. Med.*, 39:90 (Aug.), 1933.
2. Van Duyn, J., Jr.: *Arch. Int. Med.*, 52:839 (Dec.), 1933.
3. Wintrobe, M. M.: *Arch. Int. Med.*, 57:289 (Feb.), 1936.
4. Rosenberg, D.: *Am. J. Med. Sc.*, 192:86 (July), 1936.
5. Schalm, L.: *Acta Med. Scandinav.*, 93:517, 1937.
6. Sturgis, C. C.: *J. Iowa State Med. Soc.*, 28:373, 1938.
7. Wintrobe, M. M.: *J. Lab. and Clin. Med.*, 17:899 (June), 1932.
8. Wintrobe, M. M.: *Internat. Clin.*, 2 (new series): 44 (June), 1939.
9. Castle, W. B., Heath, C. W., and Strauss, M. B.: *Am. J. Med. Sc.*, 182; 741, 1931.
10. Goldhamer, S. M.: *Arch. Int. Med.*, 53:54, 1934.
11. Schiff, L., Rich, M. L., and Simon, S. D.: *Am. J. Med. Sc.*, 196:313, 1938.
12. Groen, J., and Snapper, I.: *Am. J. Med. Sc.*, 193: 633, 1937.
13. Alsted, G.: *Am. J. Med. Sc.*, 197:741 (June), 1939.
14. Wills, L., and Evans, B. D. F.: *Lancet*, 2:416, 1938.
15. Wills, L., Clutterbuck, P. W., and Evans, B. D. F.: *Biochem. J.*, 31:2136, 1937.
16. Elsom, K. O., and Sample, A. B.: *J. Clin. Investigation*, 16:463, 1937.
17. Dockera, G. C.: *Irish J. Med. Sc.* (March), 1938, p. 126.
18. Atkin, I.: *Lancet*, 1:434, 1938.
19. Bianco, A., and Jolliffe, N.: *Am. J. Med. Sc.*, 196: 414, 1938.
20. Sydenstricker, V. P., Schmidt, H. L., Geeslin, L. E., and Weaver, J. W.: *Am. J. Med. Sc.*, 197:755, 1939.
21. Wayburn, E. and Guerard, C.: *Arch. Int. Med.*, 66:161 (July), 1940.

FEMORAL HERNIA: A MODIFIED POSITION FOR ITS REPAIR*

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THE femoral vein in the usual operating position encroaches upon the operative field in the repair of femoral hernia. The purpose of this paper is to describe a modified position which displaces the femoral vein laterally, and thereby facilitates the procedure.

Femoral hernia occurs much less frequently than does inguinal hernia. Reported series of comparative statistics vary from 1:17¹ to 1:50.² This low incidence may prevent the casual operator from contacting a sufficient number of cases to become familiar with the surgical anatomy of the region, and with the accepted procedures for the repair of the defect. Therefore, a preliminary brief consideration of some of the anatomical

and diagnostic problems involved, and of the application of the different surgical approaches to the problem may be in order.

ANATOMICAL PROBLEMS

Anatomically, the structures to be considered may be divided into three groups: (1) the inguinal and lacunar ligaments, which form the roof and medial border of the ring; (2) the ligament of Cooper and the pectineal fascia which form the floor of the ring and the canal; and (3) the process of fascia, which separates the femoral vein from the canal and forms the indefinite lateral boundary of the latter. These are the structures involved in both the reduction and the repair of the hernial defect. It is the approximation of the first to the second, without injury to or constriction of the third, after the ligation, reduction, and transplantation of the sac, that constitutes an accepted operation.

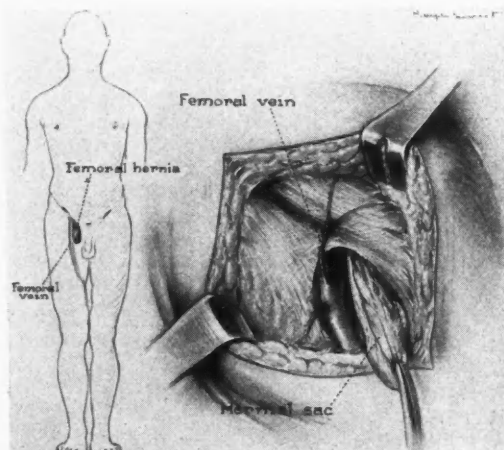


Fig. 1.—Modified position in the repair of femoral hernia. Relationship of femoral vein to sac in usual operating position.

The lacunar ligament is of particular importance, since its sectioning offers a method of enlarging the ring, when this is necessary, without cutting the main fibres of the inguinal ligament. In sectioning of the lacunar ligament there is less likelihood of damage to important structures, and a firmer closure of the ring is obtained. Anatomical studies³ have shown that in 28 per cent of all individuals an anomalous obturator artery arises from the deep epigastric artery. In 3 per cent of these cases the obturator artery descends to the obturator foramen medial to the femoral ring; in 25 per cent it descends medial to the vein, but lateral to the ring. This means that the lacunar ligament can be sectioned with less chance of vascular injury than can the inguinal ligament. Furthermore, sectioning of the lacunar ligament does not weaken the closure of the femoral ring, as does sectioning of the inguinal ligament. In the first instance repair of the ligament entails only a continuation of the closure medially over the sec-

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From the Rees-Stealy Clinic, San Diego.

tioned portion; in the second instance closure of the defect is complicated by the additional tension incident to repair of the ligament.

Cooper's ligament is of importance because it offers a firm band of transverse fibers at the highest and narrowest point of the ring for the

hernia exists, the stalk of the hernia usually can be felt as a longitudinal ridge passing beneath the inguinal ligament.

REDUCTION AND REPAIR

The reduction and repair of femoral hernia, like all surgical procedures, may be easy or difficult of execution. The local condition determines the character of the operation. There are three main approaches for the surgical repair of the condition: (1) through the inguinal canal; (2) through a low rectus or midline incision; and (3) the femoral approach below the inguinal ligament. Each surgeon has his favorite approach, but the rational procedure would seem to be to use the one best adapted to the case under consideration.

The approach through the inguinal canal has many advocates and offers several possible methods of repair: (1) suture of the conjoint tendon to Cooper's ligament (Lotheissen); (2) suture of the inguinal ligament to the pectineal fascia (Moschowitz); (3) suture of the transversalis fascia to Cooper's ligament (Dickson); and (4) the displacement, ligation, and transplantation of the sac through the inguinal incision, and the closure of the femoral canal from below the ligament. The inguinal approach is definitely indicated in cases of coexisting inguinal hernia or weakness, since it offers a single procedure for the repair of both. However, to open an intact inguinal canal, for the repair of an uncomplicated femoral hernia, hardly seems justifiable.

The repair of femoral hernia through a rectus incision, and, in thin patients, through a low midline incision, under adequate anesthesia, is an

posterior suture. For this reason it should be included with the pectineal fascia in this suture.

DIAGNOSIS

The diagnosis of femoral hernia is not always easily made. In the first place, a femoral hernia can be mistaken for an incomplete inguinal hernia. After the sac has descended to the bottom of the femoral canal, it often passes forward through the saphenous opening, and may lie over the inguinal ligament in the region of the external ring. In the second place, femoral hernia can be, and often is mistaken for an enlarged gland, and the reverse is true. I have twice seen femoral hernias, which had been mistaken for suppurative glands, needled. This is one region where diagnostic puncture should be avoided. I have seen two fatal cases of gas bacillus infection which resulted from strangulation of a small segment of intestine in a femoral hernia. Both of these hernias had been treated primarily as infected glands. Lastly, I have twice opened the abdomen for release of a partial obstruction, only to find a small strangulation, (Richter's hernia), in the femoral canal which could not be palpated externally because of excessive adiposity. A means of differential diagnosis, which has been helpful to me, is the careful palpation of the inguinal ligament just above the tumor. If a femoral

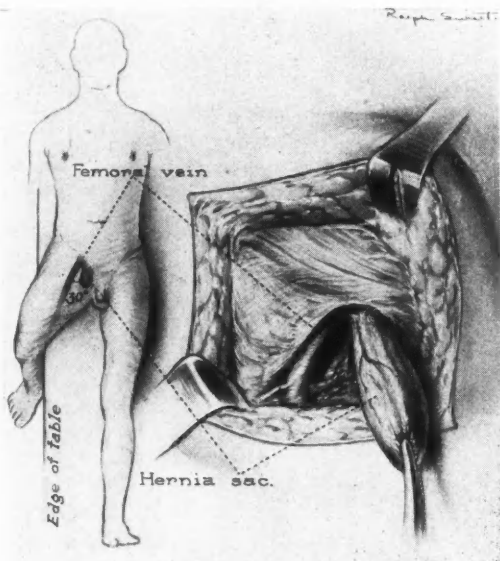


Fig. 2.—Modified position showing sac in same relative position to inguinal ligament as in Fig. 1, but with vein moved laterally.

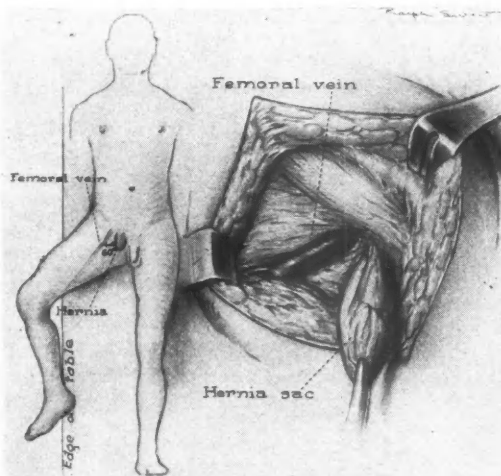


Fig. 3.—Same as Fig. 2 except that vein is moved farther from the sac by external rotation and flexion of the hip.

easy procedure. It is indicated in the course of a laparotomy if the intraabdominal operation has not been extensive, and if there is no reason to suspect active infection incidental to the intra-

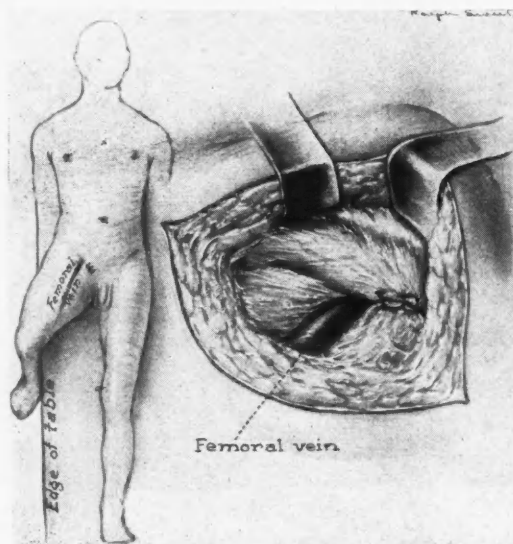


Fig. 4.—Modified position in the repair of femoral hernia. After repair, relationship of vein to lateral suture, with hip in abduction.

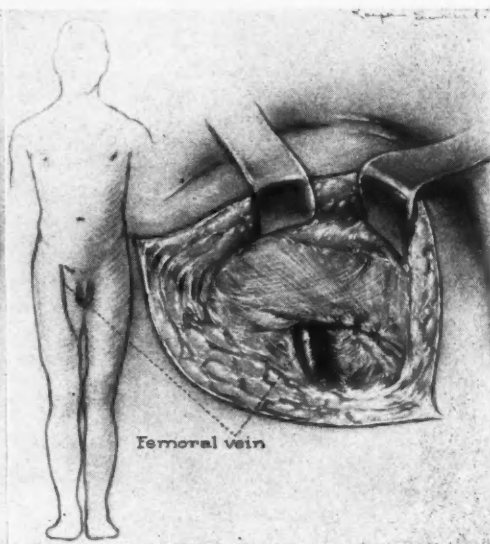


Fig. 5.—Modified position in the repair of femoral hernia. After repair, relationship of vein to lateral suture, with leg in normal position.

abdominal pathology. In this procedure, the upper aspect of the femoral ring is exposed by separating the peritoneum from the inner surface of the rectus and the lateral abdominal muscles; the sac is drawn through the ring, emptied of its contents, ligated at its neck, and resected distal to the ligature; the femoral ring is closed by interrupted sutures from above. This approach was used in each of the two cases of Richter's hernia referred to above, and has also constituted an elective procedure. It is indicated and recommended in the presence of coexistent intraabdominal pathology that can be reached through a low rectus or midline incision. In one of our cases an anomalous obturator artery was present, which was ligated and sectioned before the ring was sutured.

The femoral approach is the most direct, and results in the least damage to other anatomical structures. It also offers a direct and immediate appraisal of the contents of the sac. The most frequent technical difficulty is due to disproportion in the size of the protruding structures and the size of the ring. Sectioning of the lacunar ligament may be necessary. After the reduction of the hernia and the ligation of the sac, the stump should be transplanted high under the inguinal ligament whenever the exposure of the ligament will permit. The femoral approach is indicated in cases of uncomplicated hernia.

The proper treatment of strangulation of the intestine in femoral hernia has been well outlined by Shelley.⁴ Resection and anastomosis should not be executed below the ring, because of the difficulty of replacing the mass incidental to anastomosis, through the narrow ring, without

injury to the line of suture. In such cases the strangulated intestine should be returned to the abdomen, and the femoral ring and wound closed. Investigation of the strangulated segment should be made through a low rectus incision and the appropriate surgical procedure as determined by the appearance of the gut, carried out.

The one important structure which is subject to damage in repair of the ring is the femoral vein. This lies just lateral to the canal and ring, and at times under the hernial sac. The direction of the vein in this region is downward and 15° inward. Its presence narrows the operative field and because of its proximity to the ring, the most lateral suture in the usual operating position often leaves a large space under the inguinal ligament through which a femoral hernia can recur.

The direction of the vein can be changed from 15°, inward, to 35° and more, outward, by abduction of the hip, which is obtained by allowing the flexed knee to hang over the side of the operating table. Further displacement of the vein can be obtained by flexion and external rotation of the hip, but this position tenses the structures of the ring and of the canal. Either position displaces the vein laterally at the ring, and thus clears the surgical field sufficiently to permit not only safer, but also more lateral placing of the sutures. A more complete closure of the ring is obtained. Simple abduction is the position of choice.

After the sac has been ligated and the sutures have been placed with the hip in abduction, the leg should be brought back on the table parallel with the other leg so that the vein may be under observation during the tying of the sutures. If

the most lateral suture has been placed too far out, so as to constrict the vein, another suture may be placed medial to it before the lateral suture is removed.

In cases of large rings there may be considerable tension on the sutures even with the legs in parallel position. Tension may be further relieved by flexion of the hip, since this position relaxes the pectineal muscle, the superficial origin of which is the under surface of the pectineal fascia, and this is continuous with Cooper's ligament. In this type of case the hip should be maintained in adduction and flexion, by means of pillows under the knees, during the immediate postoperative period.

SUMMARY

1. The anatomy of the femoral region is briefly reviewed, and the indications for the three main surgical approaches for the repair of femoral hernia are discussed.

2. The repair of femoral hernia through a low rectus incision is reported.

3. A modified position, which displaces the femoral vein from the operative field and thereby assists in a more complete closure of the defect, is described.

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REFERENCES

1. Stone, H. B. Hernia. Lewis: Practice of Surgery, VII, chap. 9, p. 28.
2. McClure, R. D., and Fallis, L. S. Femoral hernia; report of 90 operations. *Ann. Surg.* 109:987-1000 (June), 1939.
3. Gray's Anatomy, ed. 24, Longman's, 1930, p. 718.
4. Shelley Harold J. Femoral hernias. *Arch. Surg.* 41:1229-1243 (November), 1940.

POISONING IN CHILDHOOD: CERTAIN SIGNIFICANT ASPECTS OF ITS ETIOLOGY AND TREATMENT*

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INTRODUCTION.—The desire of the authors to undertake a rather comprehensive review of the subject of poisoning in childhood arose from their recognition of the paucity of such studies, and a sincere wish to become better informed.

We began by asking the Coroner's office to show us what were the most common causes of fatal poison accidents, and then, so to speak, worked backwards through the receiving hospitals, and drug and grocery store shelves, finally arriving at the textbooks. The advantage of this approach was twofold. In the first place we were

immediately made aware of what was important, because we certified the actual causes of fatal accidents. The second point was that we could eliminate data not pertinent to the problem as encountered in this area.

It is so evident that new contributions to therapy of poisoning have been made in recent years, that all books prior to 1932 were empirically discredited.

Reading about toxic agents that affect children has given us the impression that articles in English are few, and may often fail to withstand close examination. One of the most reasonable was written by Aikman for the *Brennemann Pediatrics*, and is recommended reading on this subject. For the sources of information we direct your attention to concluding paragraphs of the paper.

The main portion of this review is begun by discussion of the major toxic agents responsible for acute poisoning.

MAJOR GROUPS OF TOXIC AGENTS

In attempting to list the major poisons it is at once apparent that they do not group very well. On the other hand, if we merely list them alphabetically, all pharmacological principles are abandoned, and confusion is increased.

The plan followed by McNally in his *Toxicology* is useful, and with numerous omissions it will be given herewith:

The strong acids, alkalis, and oxalic acid are *inorganic* poisons. The ability of muriatic acid and of lye to attack grease, and to open clogged drains rather guarantees that they are also very destructive to living tissue, and are powerfully corrosive.

Iodine, chlorine, permanganate and phosphorus are described as *irritant* poisons, and are capable of corrosive action, too.

The next group, the *heavy metals*, include many potent poisons, some of which are not only dangerous in the pure metallic form, as with mercury, but have highly poisonous salts as well. These substances may act through the blood stream, producing remote injury to special tissue, as mercury on kidney and lead on the central nervous system, but they also produce local corrosive action, as is seen in the stomach after ingestion of arsenic or mercuric chloride.

Gaseous poisons act in several ways; they may suffocate the individual by replacing the oxygen in the environmental atmosphere, as occurs with carbon dioxide, or they may destroy the oxygen carrying power of the blood by replacement of oxygen in the hemoglobin radical, as with carbon monoxide; or they may even act as strong pulmonary irritants, producing pulmonary edema, as follows inhalation of bromine and sulfur dioxide.

Pharmacologically, the *alkaloids* are tremendously important because they are comparatively reliable in site and manner of action; but in this part of the country, they are by no means responsible for the largest mortality in children.

* Read before the Section on Pediatrics, at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

They are none the less extremely dangerous, occur in cathartic pills, cough mixtures, plant sprays, and a great many of the poisonous plants, and are capable of producing fatalities after extremely small doses. Here we find morphine, atropine, strychnine, nicotine, cocaine, aconite, and many more.

The sixth group has the imposing title of *non-alkaloidal organic poisons*, which turns out to be most heterogeneous. The types of poisons encountered here are petroleum distillates, acetanilid-phenacetin group, barbiturates, alcohols, cyanides, formaldehyde, carbon tetrachloride, sulfanilamide, oil of bitter almonds, and many more. They are important poisons in industry, household cleaners, insecticides, fireworks, medicine, pest control, livestock remedies and in numerous other rôles.

We have felt that *local anesthetics*, such as butyn and cocaine, have little opportunity to fall into a child's hands; but this group cannot be omitted, because their use in hemorrhoidal suppositories places them in the household rather frequently.

Food, as a cause of poisoning, is so important that an entire paper could be devoted to a discussion of this one topic. For example, food may become poisonous by being prepared in a metallic vessel or canned in a metal container that has soluble lining in the presence of acid. The former occurs when cooking in galvanized pots and the latter has been noted when adding hot fruit to so-called "tin" (Zinc) containers. Poisoning may occur from bacterial toxins and by such bacterial infection as may release exo-toxins. Preservatives of the benzoate type are poisonous. Another source of trouble in food arises from confusion concerning edible and nonedible types, as with mushrooms, certain berries, and roots.

True ptomaine poisoning is regarded as rare, and implies that the individual has ingested food containing certain breakdown products of protein decomposition, such as cadaverine and aporphemas of histidine and other aminoacids. Most of the cases described by the laity as "ptomaine poisoning" are due to ingestion of *Salmonella*, such as Gaertner's bacillus, which produces acute gastro-enteritis with much vomiting and varying degrees of bowel inflammation.

SOURCES OF POISON

Since specific therapy is advised, the chemical identity of the ingested substance is of paramount importance. This brings us to the consideration of sources of poison in the home and the ingredients of commercial packages. Tables listing substances by common or trade names, with the chief poison each contains, and the preferred antidote method, are presented in alphabetical form as Appendix II (two).

The coroner's office has shown that ant paste containing arsenic is the chief cause of fatal accidents to children in this region. The unfortunate combination of a syrupy vehicle, containers close

to the ground where they are quite accessible, and a fairly high arsenic content, provides several deaths each year in Los Angeles County alone.

For more exact description of these substances you are referred to the one hundred-four page booklet titled *Economic Poisons*, prepared by Dr. Alvin Cox for the California State Department of Agriculture. In it are listed eighty-three brands of arsenic poison, and a great many other insecticides and rodenticides, including eleven different snail and slug poisons.

The arsenic pastes and sprays are constantly sampled by the State chemists to assure the buying public that the content does not fall below that indicated by the label. The manufacturers therefore consistently exceed the amounts given on the label, and occasionally a product has appeared with a content assayed at ten times the supposed amount.

Arsenic is also the offending substance in spray residues present on fruit and vegetables, after lead arsenate has been used in the orchards.

Household sources of poison include, in the kitchen, bleaches, pipe and drain cleaners, polishes, chemical soaps, metal cleaners, and even nutmeg. In the bath, toilet bowl cleaners, tile cleaners, rubbing alcohol, liniments, old medicines, cosmetics, and even hand lotions. In the garage, insecticides, plant sprays, solvents, old paint, putty, gasoline and kerosene, turpentine, soldering solutions, and even chemical fertilizers.

This would suggest a fertile field for preventive medicine, but we shall avoid that topic and direct your attention instead to therapeutic methods applicable to poisoning by known agents.

THERAPY

The general methods of treatment include several distinct phases, the relative importance of which is determined in part by the type of poison, and in part by the time element. It is perfectly evident that we wish to get rid of the poison, and that for that purpose lavage is the primary method of choice under hospital methods. If a child has swallowed coated pills, it may be possible to recover them even a number of hours after their ingestion. If, however, the fact of the ingestion of poison was not known, and a readily absorbable poison was taken many hours before the condition was recognized, lavage obviously becomes of less benefit. It is, however, the number-one general method of therapy in poisoning, and we cannot stress too strongly the importance of employing it even many hours after one might theoretically expect it to be of little value. It follows, of course, that one needs to make every possible effort to identify the specific toxic agent, because, with very few exceptions, the lavage procedure would then be carried out with a solution capable of neutralizing, or absorbing or otherwise inactivating the poison.

Contraindications to lavage are (1) convulsions as in strychnine, and (2) a badly-damaged esophagus such as may result from lye. It is not to be understood by this that the use of a Levine tube

is forbidden in each and every instance where these substances are believed to have been taken.

After lavage has been repeated, and thorough cleansing out of the stomach completed, catharsis is usually desirable to hasten the elimination of the portion of the poisonous material that has passed beyond the stomach. Here again knowledge of the type of poison will result in a choice, because oil and oily cathartics enhance the action of naphthalene and camphor, and the use of magnesium sulphate will be generally preferred, except after kerosene.

Another general method of treatment is the administration of oxygen, which is useful not only for instances of suffocation and poisoning by gases, but in various methemoglobin states in which oxygen transportation is impaired, and as an adjunct to stimulants in various depressed states following sedatives.

Stimulants have a two-fold rôle, operating not only as specific physiological antidotes to depressants and overdoses of sedatives, but also as part of "general supportive treatment" in many states approaching shock, induced by the physical trauma incident to ingestion of corrosive poisons.

Other components of shock treatment may be employed, including external heat, medication to relieve pain, and occasionally Trendelenberg position.

TECHNIQUE OF LAVAGE

Because we have stressed the importance of lavage, a few remarks are directed to it as a separate topic.

Historically the method of lavage was introduced by Philip S. Physick, Professor of Surgery at the University of Pennsylvania, about 1812, and described in his paper entitled, "Account of the New Mode of Extracting Poisonous Substances from the Stomach." He employed a rubber catheter and warm water.

The important considerations in lavage are, first of all, the proper restraint of the patient, which, with a small child, means firmly wrapping it in a sheet or blanket. The second consideration is lowered position of the head, which minimizes danger of bronchial aspiration if vomiting occurs during lavage. All sorts of rubber tubes are used; catheters are satisfactory, and except with smaller children, even the heavy-walled adult-type stomach tube is permissible. The length is about that represented by distance from bridge of nose to the xiphoid process, plus whatever extra might be required for attachment of the syringe or bulb aspirator. Except for danger of breakage, glass Luer type syringes seem ideal, because they permit examination of the material in the stomach, as to color and general consistency, even while aspiration is in progress. Sizes under 20 cc. are impractical.

Mouth gags will usually be required. Several tongue blades, heavily wrapped with adhesive tape will serve, or the mechanical ratchet device borrowed from the throat specialist's kit may be

used. A belligerent three-year-old will bite through a light calibre catheter with surprising ease.

The question of use of Levine tube through the nose deserves comment. Although the small calibre tube is more comfortable for the adult, the process is disturbing to the child with any type, and preference is given to a larger tube, by mouth, because it permits more efficient aspiration of semi-solid material.

Except when much salivation or mucus is present, a sterile dry tube is difficult for the patient to accept, and a tube just removed from ice-water, with a little tragacanth ("K-Y") jelly at the tip, will prove much easier to pass.

If aspiration is difficult mechanically, the tube must be blown out by positive pressure to assure that no plug occludes the distal orifice. If this does not relieve the situation, the tube should be lowered further into the esophagus. Introduction into the trachea is unusual, and produces so much evidence of respiratory distress that no confusion of more than momentary duration is likely.

Material recovered from the stomach should be saved, because frequently it becomes necessary to examine it chemically in identifying the source of poison, or estimating the amount of poison ingested.

Contraindications to lavage are discussed elsewhere.

ANTIDOTE SUBSTANCES

We purposely omit the emergency methods of treatment used in the home. Production of emesis by methods similar to those suggested in grandma's almanac may be important to the patient's welfare, but it is not within the scope of this paper to discuss them. The modern counterpart of the almanac is the California State Board of Pharmacy's *Official Antidotes*, which states that its instructions are "not given as the scientific antidotes or treatments," and contains such homely methods as hot mustard drinks and production of emesis by introducing the finger into the throat.

At first glance a list of antidotes seems to contain totally unrelated substances. The confusion is increased by the frequent failure of the author to state that one antidote may serve the same function as another, so that tannin is advocated for one alkaloid and potassium permanganate for another, and soda bicarbonate for a third. It may be important to name all these substances as utilizable in alkaloidal poisoning, but there is little excuse for including all of them in an antidote kit.

The nonalkaloidal organic chemicals are quite diverse and the problems created by specific treatment of their ingestion necessitates individual handling in order to obtain optimal results.

The frequency with which one to one-thousand aqueous solution of potassium permanganate is named in therapy of alkaloids and other chemical substances, forces us to include it in our antidotes. It is poisonous, per se, and its usefulness is decreased by a strongly acid medium. It is given by repeated lavage, always recovering it as

completely as possible. Its effectiveness cannot be guaranteed, but proponents include Hanzlik and other authorities.

Another indispensable antidote substance is animal charcoal, which does not render poisons inert, but adsorbs them until they can be removed or other antidotes employed. Its use is recommended for mercury, phosphorus, alkaloids, and the acetanilid group. It is used in form of a heavy suspension in water, several tablespoons in less than a pint. One gram binds about 180 mgm. of mercury, or roughly one-fifth its weight; charcoal, however, is quite light in weight.

These two substances are "universal" antidotes applicable to fifteen of the forty-five poisons that form our basic list. The remainder, unfortunately, are less readily assailable, and difficulties arise requiring individual antidotes.

Substances from the antidote kit, used during lavage, include: Five per cent ethyl alcohol used against the phenol group; soda bicarbonate 1:100 aqueous advised for alcohols; weak ammonia the only antidote mentioned for formaldehydes.

Solutions in glass ampules include sodium thiosulfate 10 per cent for intravenous use, (arsenic, mercury, cyanide); methylene blue 1 per cent, (cyanide and monoxide); metrazol and coramine, (counteracting sedative); calcium gluconate 10 per cent solution, (lead, boric acid, oxalic acid); 5 minim perles of amyl nitrite, (cyanide); barbiturates for venous use, as recommended against strychnine, and in excited states; and finally sodium formaldehyde sulfoxalate, ampules to make 10 per cent solution for poisoning by mercury and its salts.

Epsom salt, in 50 per cent solution, has been included because a strong saline cathartic is useful. Oils and oily cathartics are forbidden after ingestion of aniline, camphor or naphthalene, as they tend to facilitate absorption and enhance the poisonous qualities of those substances.

The actual list of components of the antidote kit is attached to the paper as appendix III.

UNUSUAL MODES OF POISONING

If poisoning occurred only in instances where the child was found draining a labeled bottle, little opportunity for confusion concerning the cause would occur. Actually some very bizarre episodes have been recorded, and a few of these will be presented for consideration.

When the metal in old storage batteries has been salvaged, the boxes are discarded. Use of these boxes as fuel charges the atmosphere with volatile lead, and severe clinical lead poisoning has occurred in both Los Angeles and Philadelphia. Before this was confirmed, paint from bed and walls had been analyzed, and much time and energy expended.

In an infant with eczema vaccination produced generalized vaccinia, and alcohol compresses were applied to "neutralize" the multiple pox lesions. Because of the many perforate areas in the skin, absorption was easy, and near-fatal alcoholic intoxication and stupor occurred.

In another instance a druggist gave parents lead acetate to use on a dermatological lesion instead of aluminum acetate, and an extremely severe lead encephalopathy occurred, with marked mental deterioration after prolonged and repeated convulsions.

Less obscure instances arise with the administration of camphorated oil for castor oil. Many family medicine chests contain both, and in spite of the difference in odor, the mistake will occur. The presenting symptom is convulsions, and since no satisfactory antidote is available after absorption, a fatal outcome is to be anticipated in infancy.

COMMENT ON TREATMENT METHODS

As an illustration of the influence of local trend or custom, the following items picked from a translated pediatric text are cited as subjects for constructive criticism.

Under the topic of *thallium* the suggestion is to "stop the drug" which is a perfectly reasonable instruction when over-use of the thallium in a depilatory has occurred; but in California, where thallium-treated grain is used to exterminate rats, acute fatal poisoning has been known to occur. Legislation now controls distribution of this grain and, as an additional precaution, it is colored pink.

In treatment of poisoning by phenol the use of "lavage" and "animal charcoal" were suggested. This sounds more like the trend toward universal antidotes, for American authors will usually advise 5 to 10 per cent ethyl alcohol to stop the escharotic action.

Finally, in dealing with iodine, the instruction to "stop iodine" occurs, which completely neglects the acute poisoning, formerly common in attempted suicide. We have preferred to suggest that the stomach be lavaged with starch water until the return is free from the blue iodine color.

PLANT POISONS

Geographical and climatic influences operate directly in determining the plant life of any region, and in Southern California, although a considerable portion away from the coast is described as semi-arid, sufficient variety in climate is encountered to support a good many different forms of botanical life. If there has ever been a comprehensive study of local poisonous plants, we have been unable to discover it; however, the County Live Stock Department has printed a pamphlet that covers all the local growth responsible for the poisoning of livestock. The substances contained in the plants are either alkaloids, glucosides, or hydrocyanic acid, with the exception of an occasional poisonous resin (milkweed), and the further exception of the loco weeds, which apparently derive their poisonous character from absorption of metallic substances, such as selenium and tin, from the underlying cretaceous shales.

Mushrooms deserve special consideration. Although over seventy species poisonous to man

have been found, certain forms of *Amanita* are usually responsible for the serious accidents. Very little is offered in therapy, but if there is reason to suspect that material is still in the stomach, lavage may be used, and atropine may be given hypodermically. The latter drug is useful in poisoning by *Amanita muscaria*, and no harm results if poisoning has been due to another variety, such as *A. phalloides*.

The following list of poisonous plants, by both common and botanical names, appears to be a fairly accurate enumeration of the offenders in this area:

- Fern family—brake, bracken; *Pteridium aquilinum pubescens* (?).
- Horsetail—jointed rush; *Equisetum* spp. (equisetin, an alkaloid).
- Arrow grass family—arrow grass; *Triglochin maritima* (prussic acid).
- Lily family—death camas; *Zygadenus* spp. (sygadenine, an alkaloid).
- Grass family—sudan grass, Johnson grass; *Holcus halepensis* (prussic acid).
- Buttercup family—larkspurs; *delphinium* spp. (delphinoidine, alkaloid).
- Potato family—tree tobacco; *Nicotiana glauca* (nicotine).
- Dogbane family—oleander; *Nerium oleander* (Nerioside, a glucoside).
- Milkweed family—milkweed; *Asclepias mexicana* (resin).
- Plum family—choke cherry; *Prunus* spp. (prussic acid).
- Pea family—lupines, wild pea; *Lupinus* spp. (Sparteine alkaloid).
- Pea family—loco weed; *Astragalus* spp. (metals from shales, etc.).
- Parsley family—poison hemlock; *Conium maculatum* (conine, alkaloid).
- Parsley family—western water h; *Cicuta douglasii* (cicutoxin).
- Sunflower family—cocklebur; *Xanthium* spp. (xanthostrumarin, glucoside).

ALSO

- False hellebore; *Veratrum calif.* (veratrine).
- Marihuana; *Cannabis sativa* (*cannabis indica* equivalent).
- Castor bean; *Ricinus communis* (ricin).
- Jimson weed; *Datura* spp. (atropine).
- Black night shade; *Solanum douglasii* (atropine group).
- Dogbane or Indian hemp; *apocynum cannabinum*.
- Plants listed by Los Angeles County Live Stock Department.
- Poisons taken from Muenscher, *Poisonous Plants of the United States*, 1939.

COSMETICS AND POISONS

The use of poisonous substances in cosmetic preparations has been reported from time to time, chiefly in medical journals, and more rarely in newspaper articles in connection with damage suits arising out of spectacular "accidents," such as blindness induced by using aniline-laden eye-lash dye. Except for one book by M. C. Phillips, who writes for the Consumer's Research group, very little effort has been made to educate the public on the menace represented by cosmetic substances. Aikman in his article, in the Brenne-mann *Pediatrics*, clearly recognizes the situation, and states that this group is so frequently poisonous that, if one suspects that a child has taken a cosmetic preparation, the general treatment for acute poisoning should be undertaken at once.

It is less difficult to understand Aikman's attitude when one considers the following list: some depilatories contain thallium; some lipstick contains appreciable amounts of barium; color restorers for hair have included compounds of lead, silver, aniline, bismuth and nitrobenzene; skin peel has been, in some instances, salicylic acid; astringents have shown presence of phenol; bleach cream has contained mercury; dandruff remover at least once has been well laden with arsenic; and lotions have been prepared with varying amounts of menthol, phenol and isopropyl alcohol.

The fact that the most dangerous of these is banned from the sales counter does not prevent its reappearance under another name, as occurs in the patent medicine racket. The only reasonable conclusion is that cosmetics are important potential sources of acute poisoning in the household.

COMMENT

Sources of information used in preparing this paper include only recent publications, such as Hanzlik, *Accepted Remedies*, 3rd Edition; McNally, *Medical Jurisprudence and Toxicology*; Thienes, *Clinical Toxicology*; and the article by Aikman in the Brenne-mann *Pediatrics*, Volume I.

Valuable assistance was obtained from Mr. Frank Nance, Los Angeles County Coroner, and from our County Chemist, Mr. R. J. Abernethy. Our list of poisonous plants was obtained through Dr. L. M. Hurt, from the booklet published by the County Live Stock Department. The data on insecticides are drawn largely from Dr. Alvin J. Cox's *Economic Poisons*, published by the Division of Chemistry of the California State Department of Agriculture. In addition to the data obtained from the Receiving Hospital of Los Angeles, we have had personal communications from Drs. McNally, Thienes, F. Harlan Lewis, and Mr. E. M. Becker of the Rodent Control, and others. May we take this opportunity to thank all those, both named and unnamed, who have assisted us by furnishing data.

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APPENDIX I.—ANTIDOTE METHODS ADVISED FOR SPECIFIC THERAPY OF POISONING IN CHILDHOOD

TABLE 1.—Arranged in order with key-numbers.

ANTIDOTE METHODS*

* Arranged numerically to correspond to poison list.

KEY NUMBERS	TREATMENT
(1)	Repeat lavage with potassium permanganate 1:1000 (7½ gr. to pt.)
(2)	Lavage followed by a cathartic A—saline purge. B—oily cathartic.
(3)	Egg albumen, that is to say, whites of several eggs.
(4)	Sod. thiosulfate, by vein, 5 per cent to 10 per cent, 5 or 10 cc., and repeated.
(5)	Carbogen and/or oxygen inhalations.
(6)	Barbital sedation, by hypo, or pentobarbital by vein (1/10-th gr. per lb.)
(7)	Starch water, repeatedly (against iodine), or left in G. I. as demulcent.
(8)	5 per cent ethyl alcohol, in water. (A pint, or more) (By lavage).
(9)	Methylene blue, 1 per cent, 50 cc., by vein—and repeated as required.
(11)	Sodium chloride by all routes, plain salt, also physiological salt solution.
(12)	Animal charcoal, bone-black, by lavage, several tablespoons to pint.
(13)	Stimulants, coramine, ½ ampule; or metrazol cautiously for deep stupor.
(14)	Weak ammonia, 1:1000 solution, by mouth.
(15)	Amyl nitrite inhalations, by crushing "perle" under nose.
(16)	Soda bicarb., 1 per cent aqueous (5 gms. to pint), by lavage.
(17)	Mag. sulph. (epsom salts) by lavage.
(18)	Calcium gluconate by vein (10 cc. of 10 per cent, adult dose.)
(19)	Weak acid, 0.5 per cent hydrochloric, or vinegar 1:4 in water.
(20)	Lavage with tap water; if particulate matter large, as with certain "pills," may use apomorphine grs. 1/10-th.
(21)	Olive oil, as demulcent, several ounces.
(22)	Transfusion, Gettler's method for methaemoglobinæmia.
(23)	Sod. thiosulfate by mouth—Hanzlik's method, gms. 1 to 10, oral.
(24)	Sod. formaldehyde sulfoxalate 100 to 200 cc. 10 per cent by vein, in 30 minutes time. Also gastric lavage leaving considerable (100 cc.) in stomach.

APPENDIX II.—THE MAJOR POISONS*

TABLE 2.—With antidote methods, and by key numbers.

THE MAJOR POISONS

POISONS (with popular names)	KEY NUMBERS
ARSENIC—ant paste, Paris green. (12) (4) (20)	
MERCURY—corrosive sublimate... (24) (3) (12)	
MORPHINE—cough remedies, etc. (12) (1) (13)	
ATROPINE—Hinkle's cascara... (12) (1) (13)	
COCAINE—also BUTYN... (12) (1) (16)	
NICOTINE—"Black Leaf 40"... (12) (1) (13) (5)	
STRYCHNINE—ABSC pill, rat-grain... (12) (6) (1)	
ACIDS—muriatic, sulfuric, nitric... (20) (16) (21)	
ALKALI—lye, drain openers, "Pronto"... (20) (19) (21)	
ACETANILID—acetphenetidin group... (12) (20) (9)	
ALCOHOLS—methyl, ethyl, wood alco. (16) (13) (20) (5)	
ANILINE—nitrobenzene, shoe dyes. (17) (2-A) (11) (22)	
BARBITURATES—sedative tablets (20) (13) (12) (5)	metrazol
BENZENE—solvents, gliding, benzol... (12) (5)	
BORIC ACID—eye wash, "Vince". (20) (13) (18)	
BROMIDES—sedative solutions (11)	
CAMPFORATED OIL—CAMPFOR (2-A) (20)	
CYANIDE—rat poison, insecticides (15) (9) (4) (5)	
HYDROCARBONS—kerosene, coal oil (saline cathartic, no lavage)	
IODINE—tincture iodine (7) (23)	
LEAD—paint, putty, colored chalk. (3) (18)	
MENTHOL or NAPHTHALENE—moth balls (2-A)	
OXALIC ACID—straw hat cleaner. (1) (18)	
PHENOL—carbolic acid (8) (21)	
PHENOLPHTHALEIN—cathartic tablets (20) (13)	
PHOSPHORUS—fireworks, matches (12) (1) (2-A)	
POTASSIUM CHLORATE—gargles, tablets (20) (9) (22) (5)	and stimulat.

* For key numbers, see Table 1.

SALICYLIC ACID—antipyretics... (16) (1)	
SODIUM FLUORIDE—roach powder... (12) (2-B) (18)	
WINTERGREEN—methyl salicylate... (20) (7)	
ZINC—solder paste, galvanized pots... (20) (2-A)	

APPENDIX III.—THE ANTIDOTE KIT

TABLE 3.—Antidote Supplies

If poisoning is to be treated by more or less specific agents, it will be necessary to maintain a kit reserved for that purpose alone, and to inspect it and make replacements as necessary.

Our recommendation for the components of the antidote kit is:

Potassium permanganate tablets, 3 grs., about 24 tablets.
Animal charcoal, boneblack, carbo medicinalis, ½ lb.

Ampules:

Sod. Thiosulfate 10 per cent .10 cc.	Several ampules
Pentobarbital 3.75 grs. .5 cc.	" "
Methylene Blue 1 per cent .50 cc.	" "
Calc. Gluconate 1.375 gm. .5 cc.	" "
Sod. Formald. Sulfoxalate .10 gm.	" "
Amyl Nitrite .5 minims	" perles

Tablets:

Apomorphine	2 mgm.	6 tablets
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Solutions or powders to make solutions:

Ethyl Alcohol	95 per cent, to make .5 per cent or 10 per cent aqueous sol.
Salt	Common, also physiological
Starch	Common powder
Aqua Ammonia	To make 1:1000 sol.
Soda Bicarb.	Common powder
Mag. Sulph.	50 per cent sol., several ounces
Hydrochl. Acid	0.5 per cent HCl, or vinegar 1:4 aqueous

Stimulants:

Coramine	Several ampules
Metrazol	100 mgm.

Other adjuncts to therapy:

Carbogen
Stomach tubes
Syringes
Mouth gags
Hot water bottles
Restraints

APPENDIX IV.—COMMERCIAL SOURCES OF POISON*

TABLE 4.—Arranged alphabetically by names of substances.

NAME	POISON	ANTIDOTE
ABS Pills	Atropine; Strychnine	(12) (20) (1) (6)
ABSC Pills	Atropine; Strychnine	As above
Agarol with Phenolphthalein		(13)
Alka-Seltzer	Salicylates	(16) (1)
Allonal	Amidopyrine	(12) (20) (9)
Alphebin	Barbiturates	(20) (13) (12) (1)
Amido-Neonal	Amidopyrine	See above
Analax	Barbiturates	See above
Anti-Convulsants	Phenolphthalein	(13)
	Bromides; Barbiturates	(12) (1) (13)
	Bromides	(11)
Antipyretics	Salicylates	(16) (1)
Ant Paste	Arsenic	(4) (12) (20)
Ant Syrup		(20) (2-a)
Ant Powder	Pyrethrum	(20) (2-a)
Argentine Ant Poisons	Arsenic	(12) (4)
Asthma Remedies	Ephedrine	(12) (1) (13)
	Barbiturates	
Atophan	Cinchophen	(2-a)
Battery Boxes, Fumes by Burning	Pb	(18)
Bee Brand Insect Powder	Pyrethrins	(20) (2-a)
Benzedo Compound	Amidopyrine	(12) (20) (9)
Capsules	Barbiturates	
	Arsenic	(12) (5)
Benzol	Mercury (HgCl ₂)	(24) (3) (12)
Bichloride		

NAME	POISON	ANTIDOTE	NAME	POISON	ANTIDOTE
Black Leaf 40	Nicotine	(12) (1) (13) (5)	Lugol's Solution	Iodine	(7) (23)
Bluing			Luminous Paint	Phosphorus and Radium	(12) (1) (2-a)
Bowl Clean	Hydrochloric Acid	(20) (7) (21)	Lye	Strong Alkali	(7) (19) (21)
Bromidia	Bromides	(11) and Stimulants	Lysol	Phenol Group	(8) (7)
Buhach Insect Powder	Pyrethrum flowers	(20) (2-a)			
Butyn	85 per cent Cocaine Group	(1) (16)	Matches	Phosphorus	(12) (1) (2-a)
Campho Phenique	Camphor & Phenol	(20) (7) (2-a)	Mechlings Paris Green	Arsenic (38 per cent)	(12) (4)
Capsules, Reducing	Dinitrophenol	(16) (1) (2-a)	Menthol Inhalers	Menthol	(2-a)
Carbolated Salve	Thyroid	(20)	Mentholatum	Menthol	As above
Carbolic Acid	Phenol	(8) (7)	Methyl Salicylate	Wintergreen, Oil of	(7) as Demulcent
Carbona	Phenol	As above	Midol	Amidopyrine	(12) (20) (9)
Carbon Dioxide Snow	Carbon Tetrachloride			Barbiturates	(20) (13) (12) (1)
Cascara (Hinkle's)	(or Dry Ice) Atropine	(12) (1) (13)	Mylin	As above	See above
	Strychnine	(12) (6)	Mirbane, Oil of	Aniline	(17) (2-a) (11)
Cigars	Nicotine	(12) (1) (13) (5)	Moth Balls	Naphthalene	(2-a)
Cleaners, Metal	Oxalic Acid	(1) (18)	Moth Powder	Naphthalene	As above
Cleaners, Toilet	Acid	(7) (21)			
	Sod. Bisulfate		Nasal Sprays	Ephedrine	
Cleaners, Pipe and Drain	Alkali	(7) (19) (21)		Adrenalin	
Coal Oil	Kerosene	(2-b)		Cocaine	(1) (16)
Cold Remedies	Aconite	(12) (1) (5) (13)	Neonal	See ("Midol") above	(12) (20) (9)
	Salicylic Acid	(16) (1)		See ("Midol") above	
Cooking, Galvanized Pots	Zinc	(16)	Nicofume Liquid	Nicotine	(12) (1) (13) (5)
Corrosive Sublimate	Mercury	(24) (3) (12)	Nipple Shields	Lead	Calcium by all Routes
Cough Remedies	Morphine	(12) (1) (13)			
Cresol	Phenol	(8) (7)	Nitrobenzene	Aniline Group	(17) (2-a) (11)
Cyanogas	Cyanide (42 per cent)	(15) (9) (4)			
Chalk, Colored	Pb (Lead)	(18) (3)	Oil, Camphorated	Camphor	(2-a) (20)
"Cibalgine"	Amidopyrine	(12) (20) (9)	Oil, Coal-oil	Kerosene	(2-b) (Mineral Oil)
	Barbiturates	(20) (13) (12) (1)	Oil of Mirbane	See Mirbane, Oil of	(17) (2-a) (11)
"Cinchopyrine"	As above	As above	Oil of Wintergreen	See Methyl Salicylate	(7) as Demulcent
"Clorox"	("Cibalgine") SOD Hypochlorite	Weak Acid	Orthodinitrobenzol	Aniline Group	(17) (2-a) (11)
Dental Drugs	Dental Cocaine	(1) (16)	Paint	Lead	(3) (18)
Depilatories	Thallium	(Lavage, Catharsis)	Paint Remover	Alcohol	(16) (13) (20) (5)
			Paris Green	Arsenic	(4) (12) (20)
Derris Powder	Rotenone	(20)	Paste, Ant	Arsenic	As above
Drain Cleaners	Lye	(7) (19) (21)	Paste, Solder	Zinc	(20)
Draino	Lye	See above	Peralga	Amidopyrine	(12) (20) (9)
Dyes (Shoes, etc.)	Aniline	(17) (2-a) (11) Transfusion		Barbiturates	(20) (13) (12) (1)
			Peraminal	As above	See above
Eagle Spirits	Methyl Alcohol	(16) (13) (5)	Peterman's Roach Powder	As above	See above
Eye Wash	Boric Acid	(20) (13) (13)	Pharaoh's Serpent	Fluoride, Sodium	(12) (2-b) (18)
El Rey Mouse Bait	Zinc Sulphate		Phenola	Mercury	(24) (12) (3)
Enamels	Strychnine	(12) (6)	Photographer's Solutions	Phenolphthalein	(20) (13)
Ex-Lax	Lead	(18) (3)	Pills, ABSC, ABS, Hinkle's	Silver, in some of them	(20) (12) (3)
	Phenolphthalein	(20) (13)	Pills, Reducing	Strychnine	(20) (12) (1) (6)
Fireworks	Mercury	(24) (3) (12)	Pills, Sedative	Thyroid (usually)	(20)
Pharaoh's Serpent	Phosphorus		Plant Spray	Barbiturates	(20) (13) (12) (5)
Snake-in-the-Grass	Hg		Powders, Anti-Convulsant	Nicotine (often)	(12) (1) (13) (5)
Son-of-a-Gun	Hg			Bromides	(20) (11)
Devil-on-the-Walk	P			Barbiturates—as above under "Peralga"	(Metrazol)
Giant Torpedoes	P				
Flea Powder	Rotenone	(20) (2-a)	Pronto	Lye	(20) (7) (19) (21)
Fluoride	(Tubotoxin)		Purex (Household Bleach)	SOD Hypochlorite	Weak acids, (19)
Fly-Paper	Roach Powder	(12) (2-b) (18)			
Formalin	Arsenic	(12) (4)	Purex (Pipe and drain cleaner)	Lye	See "Pronto"
Fowler's Solution	Formaldehyde	(14)	Purex (Toilet bowl cleaner)	SOD Bisulfate	
Fresnel Antiar	Arsenic	(12) (4)	Putty	Lead	(See Paint, above)
Fuel, Distillate, Lighter Liquid	Arsenic	(12) (4)	Pyrene (Extinguisher Fluid)	Carbon Tetrachloride	(20) (2-a) (7) as Demulcent
Fuel, Spirit	Hydrocarbon Group (2-b)				
	Ethyl or Methyl Alcohol	(16) (13) (5)			
Fuel, Canned Heat, "Sterno"	Alcohols	As above	Rat Poison	Strychnine, Arsenic, Thallium, Cyanide	(20) (6) (12) (1)
Galvanized Pots, Cooking in	Zinc	(16)			
Gilding	Benzene	(12) (5)	Red Arrow	Rotenone and Pyrethrins	(2-a) (20)
Glazes	Lead	(3) (18)	Garden Spray	Thyroid (usually)	(20)
"Gopher Go"	Strychnine	(20) (12) (1) (6)	Reducing Pills	Naphthalene	(2-a)
			Resin Solvents	Sodium Fluoride	(12) (2-b) (18)
Halowax	Naphthalene	(2-a)	Roach Powder		
Hat Cleaners, Straw	Oxalic Acid	(1) (18)			
Headache Powders	Amidopyrine	(12) (20) (9)	Salve	Phenols, Boric Acid, Menthol, etc.	(20) (13) (18) for Boric A.
	Salicylates	(16) (1)		Phenol	(8) (7)
Hinkle's Cascara	Strychnine	(12) (6)	Salve, Antipruritic "Sani-Flush"	SOD Bisulfate	Not very poisonous
	Atropine	(12) (1) (13)			
Holly Pipe Cleaner	Lye	(7) (19) (21)	Sedatives	Morphine	(1) (12) (13) (5)
				Barbiturates	(20) (13) (12)
Ice, Camphor	Camphor	(2-a)		Bromides	(20) (11)
Ice, Dry	Carbon Dioxide Snow	(20) ???		Phenol Group	(8) (7)
Inhalers, Menthol	Menthol	(2-a)	Sheep Dip Shields, Nipple	Lead	(18) Ca by all Routes
Ink, Marking	Silver (Cf. Hg Rx)	(24) (3) (12)			
Insecticides	Arsenic	(12) (4)	"Skalekut"	Lye	(7) (19) (21)
	Cyanide	(15) (9) (4)	Snail Killer	Metaldehyde	(20)
	Pyrethrum			Arsenic	(4) (12) (20)
	Rotenone		"Snarol"	Metaldehyde and Arsenic	See above
Jimson Weed	Atropine Group	(12) (1) (13)			
Laudanum	Morphine Group	(12) (1) (13)	"New Snarol"	Metaldehyde (only)	
Liquid Ointments, Counterirritants	Menthol	(2-a)	Snake-in-the-Grass (fireworks)	Mercury	(3) (12) (24)
Lotions, Teething	Morphine	(12) (1) (13)	"Snow" (Narcotic)	Cocaine	(1) (16)

NAME	POISON	ANTIDOTE
Snow, Carbon Dioxide	Dry Ice	?
Soldering Paste	Zinc	(20) (7) (21)
Soldering Solution	Acid	Weak Alkali, Soda Bicarb 0.5 GM to a pint
Solvent	Hydrocarbons, Petroleum type	(2-b) (20)
Soothing Syrup	Morphine	See Sedatives, above
Spirits of Camphor	Camphor	(2-a) (20)
Spirits, Eagle	Alcohol, Methyl	(16) (13) (5)
"Sterno"	Alcohol	See above
Straw Hat Cleaner	Oxalic Acid	(1) (18)
Sublimate, Corrosive	Mercury	(24) (3) (12)
Teething Lotin	Morphine	(12) (1) (13)
Tetralin	Naphthalene	(20) (2-a)
"Thalgrain"	Thallium Grain	? (20)
Thyroxin	Thyroid	(20) (2-a)
Tincture Iodii	Iodine	(7) (23)
Toilet Bowl Cleaners	SOD Bisulf (Sani-Flush)	(2-a)
	Acids (Bowl- Clean)	(20) (21)
	Lye (Pronto, Draino)	Bicarb. 1:1000 (20) (21) (19)
Tree Fumigation	Cyanide	(15) (9)
Varnish	Alcohol	(16) (13) (5)
Varnish Remover	Alcohol	As above
"Vince"	Boric Acid Group	(20) (13) (18)
Washes, for eye	Boric Acid Group	(20) (13) (18)
Weed, Jenson	Atrazine Group	(1) (12) (13)
White enamel	Arseic	(4) (12)
"Wilki"	Pyrethrins	(20) (2-a)
Wood Alcohol	Alcohol, Methyl	(16) (13) (5)

VITAMIN THERAPY IN DERMATOLOGY*

F. G. NOVY, JR., M. D.
Oakland

THE knowledge of vitamins has progressed so rapidly during the past few years that it is well to bring this subject up to date, especially in regard to the use of these products in dermatology. Experimental data, both chemical and biological, have accumulated rapidly, and have been followed by widespread clinical application. To show how quickly knowledge along these lines is progressing, there have been, since the first of the year, seven articles dealing with the use of vitamins in various cutaneous diseases in the "Archives of Dermatology and Syphilology" alone. In several of these the etiology is unknown, but the conditions apparently have responded to specific vitamin therapy.

This brief review will attempt to report on the various dermatoses in which vitamins have been used, and to evaluate them. Opposite each disease mentioned, a short phrase will indicate the value of the vitamin therapy in that particular disease.

VITAMIN A

Keratinization of Epithelium.—A deficiency of vitamin A produces abnormal keratinization of epithelium, so that in any condition where this occurs, a lack of vitamin A should be kept in mind. Therapeutic dosage: 25,000 to 200,000 U.S.P. units daily. This should be given over a period of time.

Phrynoderma (Follicular Keratoderma): A definite Vitamin A deficiency.

* Read before the Section on Dermatology and Syphilology at the Seventieth Annual Session of the California Medical Association, Del Monte, May 5-8, 1941.

From the Department of Dermatology and Syphilology, Division of Medicine, University of California Medical School, San Francisco, California.

This condition was first described by Frazier and Hu¹ in China, and Loewenthal² in South Africa, and has since been reported in this country. The eruption, by predilection, occurs on the outer aspects of the extremities and is made up of scaling and follicular plugging. Ninety per cent of these patients show the visual changes of vitamin A deficiency. Various forms of this dermatosis have been described by Youmans³ in this country.

Pyoderma: No effect.

For a time vitamin A was called "the anti-infective vitamin," but more recent work has shown that this term is not applicable.⁴ The work of Sternberg and Pillsbury⁵ showed that cutaneous inoculation with staphylococci and streptococci was the same in vitamin A deficient rats as in normal ones. They concluded that this vitamin played no rôle in preventing or curing pyogenic infections of the skin.

Pityriasis Rubra Pilaris: Results good, confirmation necessary.

Brunsting and Sheard⁶ recently studied three patients with this disease with reference to vitamin A deficiency, and the effect of therapy with vitamin A on them. All showed some night blindness. Improvement occurred in all, with large doses of A over a long period of time.

Keratosis Follicularis (Darier's disease): Results good, confirmation necessary.

In a preliminary report, Peck, Chargin and Sobotha⁷ observed four cases of this condition. All patients had a subnormal vitamin A content of the blood, ranging from 38 to 48 units per 100 cc. of serum (normal 60 to 90 units). Interestingly, they showed a normal amount of blood carotene (provitamin A). The authors feel that this condition may be due to an inability of certain individuals to convert carotene to vitamin A. The patients were all receiving adequate amounts in their diets, and there may have been a failure to absorb it from the intestinal tract. Good results were obtained in all cases with large doses.

Other Diseases.

Sulzberger⁸ states he has had good results with vitamin A in cases of keratosis pilaris and brittle nails.

Parapsoriasis⁹ was cleared in one case with 12 injections of vitamin A.

Senile vaginitis, senile skin, leukoplakia, kraurosis vulvae have been treated with encouraging results.

VITAMIN B COMPLEX

Each of the factors making up this vitamin complex will be discussed separately. Cutaneous reactions to therapeutic doses of these factors are common. They vary from mild urticaria to such generalized toxic manifestations as purpura. One should be on his guard when administering these vitamins.

VITAMIN B₁ (THIAMIN)

Therapeutic dosage 6-50 mg. daily.

Acrodynea: Variable reports (inconclusive).

This disease of infancy and early childhood has been thought by some to be due to a vitamin deficiency. Thiamin has been used by Durand, Spickard and Burgess¹⁰ in two cases with good results. Forsyth¹¹ reports four cases which apparently cleared with large doses. At the University of California our results in several cases have not been at all definite.

Herpes Zoster: Of questionable value.

The first reports on using thiamin for the pain of this condition were encouraging.¹² Rattner,¹³ reporting on sixteen patients, concluded that no benefit was obtained. Saunders¹⁴ also had the same experience. With the use of sedatives and local applications plus thiamin, (10 mg. daily) Gordon¹⁵ was able to relieve six obstinate cases, while treatment without the thiamin was of no help. My personal experience has been that there is no definite relief following the use of thiamin.

Tabetic Pain: Of value in individual cases.

At the Oakland Venereal Clinic, we found some tabetics who obtained definite relief from lightening pains, but this has not been a constant experience. Metaldi¹⁶ reported good results with intravenous use of thiamin.

Psoriasis: Of questionable value.

Madden,¹⁷ using a number of different vitamins in the treatment of this disease, felt that his best results were obtained with the use of this vitamin, (3 mg. daily) plus a low fat diet and local treatment. The results, however, were not definite enough to say that thiamin has a specific effect.

NICOTINIC ACID

Therapeutic Dosage: 50 to 1,000 mg.

Pellagra: Specific nicotinic acid deficiency.

The use of nicotinic acid in pellagra is well known. This is one of the most outstanding examples of the specific effect of a vitamin on a disease. Many cases of pellagra, however, are not completely cured and returned to normal health with the administration of nicotinic acid alone. These individuals are also suffering from a deficiency in other fractions of B complex, particularly riboflavin, which should be added to the diet.

It is well to bear in mind that not all cases of pellagra present the classical signs of the three D's (dementia, diarrhea and dermatitis). Mild cases are frequently encountered with only one or two of the signs. Indefinite erythematous, scaling eruptions on the dorsa of the hands and the face should suggest the possibility of a mild form of this disease. Stomatitis, glossitis, burning in the mouth without cutaneous manifestations, have also cleared under the administration of this vitamin and are probably examples of a mild form of the disease.

VITAMIN B₂ (RIBOFLAVIN) (VITAMIN G)

Therapeutic dosage: 5-15 mg. daily.

Cheilosis: Specific B₂ deficiency.

This disease is characterized by maceration and fissuring at the angles of the mouth. This is associated with comedone formation about the nose, which has been described as shark-skin nose. Stomatitis may also be present. This condition is quickly relieved with riboflavin.

Rosacea Keratitis: Probably specific.

This form of keratitis, associated with acne rosacea, has responded to riboflavin in a specific manner. Vascularization of the cornea also clears with this medication.

VITAMINS B₃, B₄ AND B₅

None of these vitamins have been shown to have any effect on any dermatological condition to date.

VITAMIN B₆ (PYRIDOXIN)

Lack of this vitamin produces a definite dermatitis in rats. It is symmetrical; affecting paws, ears and nose. The lesions are erythematous and scaling, and suggest seborrheic dermatitis in humans. There is, however, as yet no proof that they are one and the same disease. It should be borne in mind that a vitamin deficiency in one animal may be entirely different in another. This problem of scaling dermatosis in animals due to lack of vitamin B factors has recently been completely reviewed by Sullivan and Nicholls¹⁸ and Gyorgy.¹⁹

PANTOTHENIC ACID

This fraction of the filtrate factor has been shown to be effective in curing chick dermatitis. As yet there have been no reports of the use of this fraction in humans.

WHOLE VITAMIN B COMPLEX

Lichen Planus: Results good—confirmation necessary.

Burgess²⁰ treated 15 patients, having lichen planus with vitamin B complex, by mouth and injections of liver extract. In the acute cases he obtained good results promptly. In the chronic ones the results were slower. He was unable to determine which factor of vitamin B complex had a specific effect on this disease.

Vitamin B complex deficiency: Results good.

Under this term Gross²¹ has just published an extensive article in which he describes a group of patients which he feels was deficient in the whole complex. This condition is nonpellagrous in nature, but responds to vitamin B complex (injections of whole liver). This group is not a clear-cut clinical entity. These patients, however, have pictures in common. Gross divides the cases into five groups. The first has symmetrical extensive seborrheic-like patches involving the trunk. The second has a localized seborrheic eczema with a generalized eruption. The third group has an extensive monilial infection which cleared with liver injections. Gross feels that the

deficiency of B complex is the background for the superimposed monilial infection. Group number four is made up of patients with dermatitis involving the vulva and anus, and in some a definite krausosis vulvae. Vitamin A is of value along with B in these cases. The last group consists of patients with seborrheic dermatitis-like arsphenamine reaction, which clears with injections of liver. All of these groups have in common a low gastric acidity which may be of great significance with regard to their ability to assimilate vitamin B.

VITAMIN C (CEVITAMIC ACID)

Lack of this vitamin causes a loss of collagen and intracellular substances in tissues of mesenchymal origin. This leads to fragility of blood vessels and disturbances in structure of bone and teeth, as is seen in scurvy.

Therapeutic dosage: 15 to 40 mgs. (900-1800 I.U.)

Scurvy: Definite C deficiency.

In most communities true full-blown scurvy is rare. The subclinical types of this disease are of particular interest, however, as they are more frequently encountered in practice. The dermatologist may see these patients because of bleeding gums, mild purpura or the fact that bruising occurs easily.

Arsphenamine Sensitivity: Controversial, further observations necessary.

Cormia²² has shown that patients who have had dermatitis from arsphenamine can be made tolerant to the drug by taking large doses of vitamin C (500 mg. intravenously daily) so that blood vitamin C becomes normal. He then continues giving the vitamin and, beginning with small doses of arsphenamine, is able rapidly to increase the dose to therapeutic effectiveness without reaction. This has been done previously in guinea pigs, and is extremely important from a practical standpoint in the treatment of syphilis. More observations along the line of Cormia's work should be carried out to substantiate his findings.

Vitamin C did not prevent purpura haemorrhagica from developing in patients sensitive to the arsphenamine, according to Falconer, Epstein and Mills.²³ They report on seven patients who developed purpura while receiving antilutetic therapy. These patients were given large amounts of vitamin C, followed by small doses of the antilutetic drug to which they were sensitive. All of them had a severe reaction with marked reduction in platelet count. In some instances the reaction was more profound than without vitamin C. The authors concluded this vitamin was of no help in preventing this type of purpura.

Pigmentation: Vitamin C of value.

Cornbleet²⁴ has shown that there is a definite relationship between pigmentation and vitamin C. Increased pigmentation occurs when there is a low vitamin C content of the blood. In Addison's disease, large doses of C have caused some decrease in pigmentation. This observation may lead to the improvement of other eruptions in

which there is an increase in pigmentation.

Other Cutaneous Diseases: No effect observed.

In an excellent article Lever and Talbot²⁵ could find no correlation between the blood level of C and various cutaneous diseases. Therapy with large doses (200 mg. daily) was given 18 patients with a low vitamin C level in the blood. None of them showed improvement. The diseases studied included lupus vulgaris, psoriasis, atopic eczema, lupus erythematosus and others.

VITAMIN D

The antirachitic vitamin is essential in maintaining the mineral balance, particularly that of calcium and phosphorus.

Therapeutic dosage: 10,000 to 500,000 units daily.

Acne Vulgaris: Controversial.

The value of this vitamin in acne is still an unsettled question. Some authors claim good results and others state that it has no beneficial effect. Maynard²⁶ probably has had more experience with this problem than most others. In his series of 130 patients he obtained satisfactory results in nearly eighty per cent. In a parallel series treated with x-ray, only 45 per cent improved. Most authorities believe that good results in acne can be expected in from eighty to ninety per cent of patients with x-ray therapy. Lunsford,²⁷ in discussing Maynard's paper, reported a group of patients with acne who received only vitamin D (Calciferol) and no local therapy. Sixty-one per cent of these showed no improvement, or were worse at the end of two months. In the last year Simpson²⁸ discussed a small group of patients with acne. He and his coworkers stated that vitamin D was of no practical value. Wright²⁹ recently reviewed this subject and reported twenty-five patients. He found an improvement as far as pustulation was concerned in 64 per cent, but none of his patients were cured. All relapsed when vitamin D was discontinued. He concluded that vitamin D is a helpful adjunct, but alone is not curative.

Psoriasis: Of no value.

Early reports³⁰ on the use of massive doses (300,000 to 500,000 units) of vitamin D in this most baffling of diseases were very promising. Later reports of larger series, with longer periods of observation, have been disappointing. Clarke,³¹ summarizing for the Cincinnati Dermatological Society, concluded that "this type of therapy is unreliable to control or to cause involution of psoriatic lesions." Wright²⁹ also treated a group with this vitamin and concluded it is not specific. He did observe, however, an excellent result in one patient with pustular psoriasis.

Pemphigus (chronic type): Arrests the disease.

Vitamin D appears to have a very beneficial effect in the chronic form of pemphigus. The articles of King and Hamilton,³² and Tauber and Clarke³³ have shown that this disease can be controlled, but that large maintenance dosage (100,000 to 300,000 units) must be continued. I have³⁴ under my observation a patient who was

in extremis eighteen months ago with this disease. Since then her disease has been controlled, with the exception of a few blebs, by large doses of Vitamin D (300,000 to 600,000 units daily. Her general health is excellent. The total serum calcium a month ago was 10.3 mgs. per cent.

The recent work of Lever and Talbot²⁵ concerning the rôle of vitamin D is extremely interesting. They find that patients with chronic pemphigus have a lowered blood serum calcium, as well as a reduction of serum sodium and protein. These can be raised by the administration of vitamin D. Dihydrotachysterol raises serum calcium more effectively than viostrol. They reported a series of 10 patients treated by this drug. Two patients died shortly after treatment was started and are not included in this series. Those remaining had definite remissions which were maintained as long as dihydrotachysterol was continued. Laboratory work showed that, shortly after starting medication, there was a rise in serum calcium, sodium and protein. This rise corresponded with clinical improvement. They warn against large doses in elderly individuals and those with renal impairment.

Scleroderma: Further observation necessary.

Cornbleet and Struck,³⁶ and Maynard²⁶ described good results with the use of vitamin D in this condition.

OTHER VITAMINS

Vitamin E (alpha Tocopherol) has not as yet been found to have any direct therapeutic action on any cutaneous disease.

Vitamin H (biotin) prevents egg-white injury in the rat. The cutaneous manifestations of this deficiency are scaling, erythema and alopecia located about the groins, genitalia and neck. It suggests seborrheic dermatitis. Biotin, however, so far has not been of definite value in the latter disease.

Vitamin K is necessary for the formation of prothrombin. Deficiency of this vitamin causes hemorrhagic disease of the newborn and increases coagulation time in adults when there is absence of bile in the intestinal tract. The presence of bile is essential for the absorption of vitamin K. Follicular petichiae associated with a C deficiency, (scurvy) has no relation to vitamin K deficiency.

Vitamin P (citric) prevents increased permeability of capillaries. There has been some question as to whether this is a true vitamin. Recently Goldfarb³⁷ gave this substance to patients with psoriasis. In none did this eruption clear, but many showed improvement. Further investigations are necessary to determine the value of this form of therapy.

COMMENT

This review, which is by no means complete, shows that certain vitamins are of value in a number of unrelated skin diseases. These substances have been used in many others without benefit. Vitamins are not a panacea for cutaneous diseases of unknown etiology. Undoubtedly, however, new uses will be found for them in derma-

tology and these will be substantiated by further clinical observation.

411 Thirtieth Street

REFERENCES

1. Frasier, C. N., and Hu, C.: Arch. Int. Med. 48:507, 1931. Arch. Dermat. and Syph., 33:825, 1936.
2. Loewenthal, L. J. A.: A New Cutaneous Manifestation in the Syndrome of Vitamin A Deficiency, Arch. Dermat. and Syph., 28:700, 1933.
3. Youmans, J. B., and Corlette, M. B.: Specific Dermatoses Due to Vitamin A Deficiency, A. M. J. Sc. 195, 644-650 (May), 1938.
4. Clauser, S. W.: The Vitamins, Pub. by A. M. A., page 82.
5. Sternberg, T. H., and Pillsbury, D. M.: Arch. of Dermat. and Syph., 35:247, 1937.
6. Brunsting, L. A., and Sheard, C.: Dark Adaptation in Pityriasis Rubra Pilaris, Arch. of Dermat. and Syph., 43:42 (Jan.), 1941.
7. Peck, S. M., Chargin, L. and Sobotha, H.: Keratosis Follicularis (Darier's Disease), Arch. Dermat. and Syph., 43:223 (Feb.), 1941.
8. Sulzberger, M. B.: Discussion of Brunsting's Article, Arch. Dermat. and Syph., 43:42 (Jan.), 1941.
9. Abstract. Arch. Dermat. and Syph. 39:1049 (June), 1939. Tzonch, A., Sidi, E., and Paillas, J.: Bull. Soc. Franc de dermat et Syph., 45:1818 (Dec.), 1938.
10. Durand, J., Spickard, W. W., and Burgess, E.: Acrodynia Treated With Intramuscular Injections of Vitamin B₁, J. Pediat., 14:74-78 (Jan.), 1939.
11. Forsyth, J.: Pink Disease (Acrodynia) Treated by Vitamin B₁, M. J. Australia 2:751:755 (Nov. 18), 1939.
12. Goodman, M. J.: Calif. and Western Med., 51:105, 1939.
13. Rattner, H., and Roll, H. C.: Herpes Zoster and Vitamin B₁, J. A. M. A., 112:2585 (June 24), 1939.
14. Saunders, T. S.: Vitamin Therapy in Dermatologic Practice, Northwest. Med., 39:209-212 (June), 1940.
15. Gordon, A.: Herpes Zoster and a Method of Using Vitamin B₁, M. Rec. 151:273-275 (Apr. 17), 1940.
16. Metaldi, P. F.: Am. J. Syph. Gonorr. and Venereal Diseases, 23:1, 1939.
17. Madden, J. F.: Treatment of Psoriasis, J. A. M. A., 115:588 (Aug. 24), 1940.
18. Sullivan, M., and Nicholls, J.: The Nutritional Approach to Experimental Dermatology, J. of Inv. Derm. 3:309-337 (Aug.), 1940.
19. Gyorgy, P.: Dietary Treatment of Scaly Desquamative Dermatoses of the Seborrheic Type, Arch. Dermat. and Syph. 43:230 (Feb.), 1941.
20. Burgess, I. F.: The Treatment of Lichen Planus With Vitamin B Complex, Canad. Med. Assoc. J., 44:120-123, 1941.
21. Gross, P.: Non-pellagrous Eruptions Due to Deficiency of Vitamin B Complex, Arch. Dermat. and Syph. 43:504 (March), 1941.
22. Cormia, F. E.: Post-Arsphenamine Dermatitis, J. Inv. Dermat., 4:81 (Feb.), 1941.
23. Falconer, E. H., Epstein, N. N., and Mills, E. S.: Purpura Haemorrhagica Due to the Arsphenamines. Arch. Int. Med. 66:319-338 (Aug.), 1940.
24. Cornbleet, T.: Arch. Dermat. and Syph., 35:471, 1937.
25. Lever, W. F., and Talbot, J. A.: Role of Vitamin C in Various Cutaneous Diseases, Arch. Dermat. and Syph. 41:567 (April), 1940.
26. Maynard, M. T.-R.: Vitamin D in Acne, Comparison With x-ray Treatments, Calif. and West. Med., 49:127 (Aug.), 1938. Maynard, M. T.-R.: Vitamin Therapy in Dermatology, Arch. Dermat. and Syph. 41:842 (May), 1940.
27. Lunsford, C. J.: Discussion of Maynard's Article, Arch. Dermat. and Syph. 41:855 (May), 1940.
28. Simpson, C. A., Ellis, F. A., and Kirby-Smith, H.: Vitamin D in the Treatment of Acne, Arch. Dermat. and Syph. 41:835 (May), 1940.
29. Wright, C. S.: Vitamin D Therapy in Derm., Arch. Dermat. and Syph. 43:145 (Jan.), 1941.

Note. References 30-37 appear on page 165.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section on pages 2, 4 and 6.

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OFFICIAL BUSINESS

OFFICIAL CALL: 71ST ANNUAL SESSION

To the Officers, Delegates, and Members of the California Medical Association

The seventy-first annual session of the California Medical Association will be held in Del Monte, California, from Monday, May 4, through Thursday, May 7, 1941.

The House of Delegates will convene on Monday, May 4.

The Scientific Assembly of the Association will open with the general meeting held on Monday, May 4, at 9 a. m.

The various sections of the Scientific Assembly will meet on Monday afternoon, May 4, and subsequently according to their respective programs.‡

HENRY S. ROGERS, *President.*

LOWELL S. GOIN,

Speaker, House of Delegates.

PHILIP K. GILMAN,

Chairman of Council.

Attest:

GEORGE H. KRESS, *Secretary.*

Proposed Amendments

Submitted at the 1940 Annual Session

Procedure to be followed in consideration of proposed amendments is outlined in Article XV, Section 1, of the C. M. A. Constitution and By-laws, as follows:

ARTICLE XV.—AMENDMENTS

SECTION 1.—*Procedure to Amend Constitution*

Any member of the House of Delegates at any meeting of any regular annual session thereof may present an amendment or amendments to any article or articles or any section or sections of any article or articles of this Constitution.

Such proposed amendment or amendments shall be in writing and shall be filed with the Secretary and shall thereafter be published at least twice in separate issues of the OFFICIAL JOURNAL of this Association prior to the next regular session of the House of Delegates.

At the said next regular session of the House of Delegates, such proposed amendment or amendments shall be submitted to the House of Delegates, for consideration at any meeting of the House of Delegates during that annual session, and if two-thirds of the delegates present and voting vote in favor thereof the same shall be adopted.

1 1 1

Proposed amendment regarding possible exemption of dues of members who enter the military service:

Resolved, That Section 1 of Article XI of the Constitution of this Association, California Medical Association, is hereby amended by adding to the first paragraph of said section the following:

Annual dues may be reduced or waived with respect to those members serving in the armed forces of the United States during the whole or any part of the year, and the Council may in its discretion refund in whole or in part from the funds of the Association dues paid in 1940 or 1941 by, or on behalf of the active members, if such members were at the time actually in the service of the armed forces of the United States. So that said Section 1 of Article XI shall hereafter read as follows:

Section 1. Annual Assessment of Dues—Other Sources of Funds—Appropriations. Funds shall be raised by equal

‡ Programs will appear in the April issue of CALIFORNIA AND WESTERN MEDICINE.

annual per capita assessment of dues from the active and associate members, assessment of dues upon the associate members to be one-half of that upon the active members. Annual dues may be reduced or waived with respect to those members serving in the armed forces of the United States during the whole or any part of the year, and the Council may in its discretion refund in whole or in part from the funds of the Association dues paid in 1940 or in 1941 by or on behalf of active members if such members were at the time actually in the service of the armed forces of the United States. The amount of the assessments shall be fixed by the House of Delegates by a majority vote of the members present and voting. Funds may also be raised by voluntary contributions, through bequests, legacies, devices, and gifts, and from the Association's publications, by special assessments, and in any other manner approved by the House of Delegates. Any resolution passed and adopted by the House of Delegates at any regular or special session thereof, which provides for or contemplates the appropriation or expenditures of the sum of more than \$1,000, shall not be effective for any purpose unless and until approved by the Council. All appropriations, regardless of amount, approved and made by the Council, shall, if expended, be reported to the House of Delegates at its next annual session, and any unexpended portion of any thereof shall be included in the annual budget.

1 1 1

Proposed Amendment—Regarding Assessments

The proposed amendment is as follows:

"Amendment to Article XI, Section 1, of the Constitution of the California Medical Association.

Resolved, That Section 1 of Article XI of the Constitution of this Association, the California Medical Association, be, and same hereby is, amended by striking out of said section the following: "Funds may also be raised by voluntary contributions, through bequests, legacies, devices, and gifts, and from the Association's publications, by special assessments, and in any other manner approved by the House of Delegates." And by inserting in lieu thereof the following: "Funds may also be raised by any of the following methods: (a) publications of the Association; (b) voluntary contributions; (c) bequests, legacies, devices, and gifts; (d) special assessments levied by the House of Delegates; and (e) in any other manner approved by the House of Delegates. In the event that the House of Delegates levies any special or other assessment other than the annual assessment of dues, it may, in the resolution levying the assessment, fix and determine the time within which such assessment must be paid, the class or classes of members of the Association upon whom it is levied, and the penalty, if any, including forfeiture or suspension of membership in this Association or the component county medical society, or both, to result from nonpayment thereof within the time prescribed."

COUNCIL OF THE CALIFORNIA MEDICAL ASSOCIATION

Minutes of the Two Hundred Ninety-Eighth (298th) Meeting of the Council of the California Medical Association*

Meeting was called to order in room 302 of the Sir Francis Drake Hotel at San Francisco, on Sunday, March 1, 1942, at 10:00 A.M., Chairman Philip K. Gilman presiding.

1. Roll Call.

Present: Chairman Philip K. Gilman, and Councilors Henry S. Rogers, William R. Molony, Lowell S. Goin, E. Earl Moody, Dewey R. Powell, Sam J. McClendon, Edward B. Dewey, Louis A. Packard, Axel E. Anderson, R. Stanley Kneeshaw, Frank R. Makinson, Frank A. MacDonald, Calvert L. Emmons, John W. Cline, John W. Green, Edwin L. Bruck, Donald Cass, and George H. Kress, Secretary-Treasurer.

Absent: Past-President Harry H. Wilson.

* Reports referred to in minutes are on file in the headquarters office of the Association. Minutes as here printed have been abstracted.

Present by Invitation: Dwight H. Murray, Chairman of Committee on Public Policy and Legislation; E. Vincent Askey, Vice-Speaker; Harold A. Fletcher, Chairman of C. M. A. Committee on Medical Preparedness; John Hunton, Executive Secretary; A. E. Larsen, Medical Director of California Physicians' Service; Hartley F. Peart and Howard Hassard, Legal Counsel, and Ben Read, Secretary, Public Health League.

2. Minutes.

Minutes of the 297th meeting, held at San Francisco, on Saturday, January 17, 1942, were approved. (Abstract was printed in CALIFORNIA AND WESTERN MEDICINE, February, 1942, on page 80.)

3. Membership.

(A) A report of membership was submitted and placed on file. Total members who paid 1941 dues, 6,785; total number of new members in 1941 included in the above, 440.

(B) A list of 3 active members whose 1941 dues had been paid subsequent to the last meeting of the Council, held on January 17, 1942, was submitted. Upon motion duly made and seconded, their active membership for the year 1941 was reestablished.

(C) Upon motions duly made and seconded, it was voted as follows:

(a) That the request of Arthur B. Cecil of Los Angeles County, to be transferred from the retired to the active membership list, be granted;

(b) That the request of Everett S. McClelland, a member of the Los Angeles County Medical Association, for life membership, under provision 4 of Article 4, Section 1 of the C. M. A. constitution, be granted;

(c) That the duly accredited applications received from component county societies for retired membership be granted to the following: Raleigh W. Burlingame, San Francisco County; Laurence H. Hoffman, San Francisco County; Herbert C. Moffitt, San Francisco County; Thomas T. Matlock, Kern County; John W. Marchildon, Los Angeles County; Addie B. Allen, Los Angeles County; Charles Lewis Allen, Los Angeles County; Hill Hastings, Los Angeles County; M. Lee Martin, Los Angeles County; Reginald S. Petter, Los Angeles County; and Frank J. Bailey, Tehama County.

(d) That John Vernon Smith, M.D., San Francisco; and Alexander D. Barclay, M.D., Riverside, two physicians now in U. S. Public Health Service, be elected to associate membership.

4. Financial.

Report of finances, as of February 28, 1942, was made by Mr. Hunton.

5. California Physicians' Service.

Discussion was had of unit values for services rendered the C. P. S. beneficiary members by professional members. Ways and means whereby the unit values might be increased were considered. Chairman Gilman stated that members of the Council of the Alameda County Medical Association and of the Board of Trustees of California Physicians' Service had been invited for a luncheon conference at noon, in order to secure additional factual data.

6. Recess.

The subject of unit values was taken up in friendly conference, and it was agreed that a special study should be made of the subject.

7. California Physicians' Service (Continued).

After further discussion of California Physicians' Service needs and procedures, action was taken as follows:

Upon motion by Councilor Packard, seconded by Councilor Anderson, it was

Resolved, that a special committee of seven be appointed by the Council Chairman, to be composed of three members from the northern section and three members from the southern section of the State, one member of each group to be appointed as sub-chairman, the entire committee to be under the chairmanship of Council Chairman Gilman; and be it further

Resolved, that the said committee be instructed to make a prompt study of the resolution and other data submitted by the Council of the Alameda County Medical Association, and to bring in to the Council, within thirty days, if possible, a report, in which would be indicated best ways and means of creating a betterment in the unit value for professional members of California Physicians' Service, and also to outline changes and measures through which it might be possible to eliminate defects, and also to bring about improvements that would give assurance for a progressive improvement in unit values of C. P. S.

Upon motion by Cline, seconded by Kneeshaw, it was

Resolved, that the Council of the C. M. A. has the full confidence in the integrity and ability of the Trustees of California Physicians' Service, and commends the steps they have taken to carry through the instructions received from the C. M. A. House of Delegates, which instructions from the supreme body of the California Medical Association were designed to bring into being a statewide, non-profit medical and hospitalization service for citizens of California belonging to what is known as the lower income group; and further be it

Resolved, that the C. M. A. Council expresses to the members of the Board of Trustees of California Physicians' Service the appreciation of the Council for the massive and able services so generously rendered in establishing C. P. S. on a self-sustaining basis.

8. Adjournment.

Upon motion duly made and seconded, the Council adjourned.

PHILIP K. GILMAN, *Chairman*
GEORGE H. KRESS, *Secretary*

CALIFORNIA COMMITTEE ON MEDICAL PREPAREDNESS†

Re: Federal, State and Local Procurement Services
(copy)

Office for Emergency Management
OFFICE OF DEFENSE HEALTH AND WELFARE SERVICES
Washington, D. C.

February 10, 1942.

To the Editor:—The services of your organization [California Medical Association and its component County Societies] have been offered to the Surgeons General of the Army, Navy and Public Health Service, and to the Committee on Medical Preparedness of the American Medical Association.

Because of the present emergency, the President of the United States created the Procurement and Assignment Service for Physicians, Dentists and Veterinarians. This Service is charged with provision of equitable distribu-

tion of all physicians, dentists and veterinarians of the Nation, not only for the military forces, but also for the governmental, industrial and civil agencies which require medical personnel for the duration of the war.

Complete coöperation of all national, state and local organizations in the performance of the duties of the Procurement and Assignment Service is greatly needed. On behalf of the Directing Board, may I ask the assistance of your organization in problems pertaining to the utilization of physicians, dentists or veterinarians?

The Board will appreciate your hearty support in this undertaking. May we request that any program with reference to personnel which your society would like to suggest for the national defense, be submitted to this Agency for its consideration before being made an official action of your organization?

Sincerely yours,

(Signed) SAM F. SEELEY, M. D.,
Executive Officer,
Procurement and Assignment Service.

Northern and Southern Divisions of the Subcommittee on Health of the Committee on Health, Welfare and Consumer Interest, California State Council of Defense.

Chairman, Bertram P. Brown, M. D., 760 Market Street, San Francisco

NORTHERN DIVISION

Medical Group:

Harold A. Fletcher, M. D., 490 Post Street, San Francisco
O. D. Hamlin, M. D., 389 Thirtieth Street, Oakland
Charles Edward Smith, M. D., 2330 Clay Street, San Francisco
W. Elbert Ashland, D. O., 1220 East Fourteenth Street, San Leandro

Nurses:

Miss Helen Reynolds, Visiting Nurses Association, 1636 Bush Street, San Francisco
Miss Gladys Badger, American Red Cross, San Francisco

Hospital Representative:

Dr. Howard S. Johnson, St. Lukes Hospital, 27th and Valencia, San Francisco

* * *

SOUTHERN DIVISION

Medical Group:

William Wallace Dodge, M. D., Roosevelt Bldg., 727 West Seventh Street, Los Angeles
Elmer A. Belt, M. D., 1893 Wilshire Boulevard, Los Angeles
Lewis A. Alesen, M. D., 1925 Wilshire Boulevard, Los Angeles
K. Grosvenor Bailey, D. O., 649 South Olive Street, Los Angeles

Nurses:

Miss Pauline W. Gage, 160 Lincoln Avenue, Pomona (California Nursing Association)

Hospital Representative:

Mr. Paul C. Elliott, Presbyterian Hollywood Hospital, Los Angeles

Rehabilitation Program for Selectees

Tests of a physical rehabilitation program, intended to make many registrants who were rejected because of

†Harold A. Fletcher, M. D., 490 Post Street, San Francisco, is the chairman of the California Committee on Medical Preparedness. Henry S. Rogers, M. D., room 1938, 450 Sutter, San Francisco, is a member of the American Medical Association Committee on Medical Preparedness. Roster of county chairmen on Medical Preparedness appeared in CALIFORNIA AND WESTERN MEDICINE, August, 1940, on page 86.

minor physical defects fit for active military service, have been authorized in Maryland and Virginia, National Headquarters, Selective Service System, has announced.

Authorization of the rehabilitation programs in the two States marks the beginning of a long-planned nation-wide physical rehabilitation campaign. When the results of these pilot tests are evaluated, a date for the inauguration of the National program will be set.

Only those registrants whose disabilities are certified by the Army as being remediable will be eligible to undergo treatment.

As one of the first steps in the Maryland and Virginia test programs, the Director of Selective Service of each State will submit to National Selective Service Headquarters lists of physicians and dentists qualified to correct physical defects of registrants. Physicians and dentists designated to render these authorized professional services will be paid by the Federal Government.

National Headquarters emphasized that any physician or dentist can apply to be designated to assist in the rehabilitation program. Physicians and dentists not already designated by registrants as their choice for dental or medical treatment, and other physicians and dentists who wish to take part in the program, may obtain the necessary application forms from their local boards.

Army—Navy Ranks and Pay

In answer to numerous questions about army and navy ranks and compensation the following is submitted:

The amount of pay listed herewith is applicable to both domestic and foreign duty. Allowances are not listed as they are dependent upon a variety of conditions—whether officer is single or married, how large a family, whether government can furnish quarters, etc., etc.

Army	Compensation (Base Pay)
2nd Lieut.	\$1,500.00
1st Lieut.	2,000.00
Captain	2,400.00
Major	3,000.00
Lieut. Col.	3,500.00
Colonel	4,000.00
Brig. General	6,000.00
Major General	8,000.00
Lieut. General	8,000.00
General	8,000.00

Navy	Compensation (Base Pay)
Ensign	\$1,500.00
Lieut. (j.g.)	2,000.00
Lieut. (s.g.)	2,400.00
Lieut. Comdr.	3,000.00
Commander	3,500.00
Captain	4,000.00
Commodore (Extinct)	6,000.00
Rear Admiral	8,000.00
Vice Admiral	8,000.00
Admiral	8,000.00

Examination of Selectees

After a lapse of about three weeks during which time physical examinations of draft registrants were carried on in only a few centers in California, the Army Recruiting Service is preparing to announce the new basis of physical examinations. New orders have not yet been issued, but the following procedure is understood to be the one contemplated:

Draft registrants will be examined by local physicians

in the same manner as in the first 12 or 13 months of effectiveness of the Selective Service Act. Questionable cases will be referred by local examining physicians to the Medical Advisory Board; registrants passed by local examiners will be sent immediately to induction centers for final type Army examinations, which, if passed, will cause the registrant to be sent immediately to a reception center, or Army camp. In cases of extreme personal hardship the reception center may give the new soldier an initial furlough of not more than 10 days, in which time he can settle his personal affairs.

This means that local physicians will again be working with local draft boards, handling complete physical examinations, including serology.

It also means that the vast amount of gratis medical service already rendered by physicians is to be augmented in proportion to the vast increases in prospect for the Army.

Military Clippings—Some news items of a military nature from the daily press follow:

Navy Picks Up Priceless Medical Information at Hawaii Raid

The medical officers of the United States Navy here lost no time in profiting from the experiences of Pearl Harbor, it was indicated in a Fleet Medical Newsletter released here yesterday.

The Newsletter, prepared by Captain E. A. M. Gendreau, Medical Officer of the Pacific Fleet, stresses the attention necessary for prevention and treatment of burns. Other vital items concern the necessity of available morphine "Syrettes" at all parts of warships, and the need for gas masks and flashlights.

A partial text of the newsletter follows:

For purposes of emphasis, the outstanding medical lessons learned on December 7 at Pearl Harbor are listed according to their importance:

First: Burns. These furnished more than 60 per cent of our casualties and indicated the need for a marked increase of our previous provisions and means for the application of simple remedies in large quantities for use in this type of casualty.

The most excellent, under our circumstances, was the dipping of large dressings in a mixture of mineral oil and sulfa drugs and their application to burns; another was the dipping of battle dressing in gun tubs, filled with Tannic Acid solution and their application to burns.

Second: First aid material. This must be dispersed throughout the ship for easy accessibility. No concentration of essential dressing or drug supplies must be permitted. There were innumerable instances wherein sections of ships were completely isolated and local supplies were the only ones procurable. The number of first aid boxes should be increased, and they should be filled to capacity.

Third: Morphine "Syrettes" are essentials which proved of priceless value on December 7. No time could be devoted to the preparing of hypodermics or hypodermic solutions in the usual manner until the 2½-hour attack was finished. One must consider the distribution of these "syrettes" throughout the ship by some practical safe means.

Fourth: Gas masks. The necessity for masks was never so apparent as in the presence of fuel oil fires and their thick, impenetrable black smoke. Any task would have been impossible without masks. No compartment wherein a bomb or torpedo has exploded should be entered without a mask.

Fifth: First aid. Instruction to ships' companies must be intensified. The intelligent application of first aid measures by ships' personnel was so apparent on all sides and the life saving which resulted so evident that we must use all means possible to impart any aid knowledge at all possible opportunities.

Sixth: Anti-flesh clothing or long-sleeved jumpers or slacks should be worn. Slacks should be tucked in to the tops of shoes or socks. Flash burns on extremities were numerous and the lines of the burned areas were sharply at the limits of wearing apparel.—San Francisco Chronicle, March 2.

Wounded Saved at Pearl Harbor

New York, March 3. (AP).—A lucky break for Pearl Harbor's wounded, a dress rehearsal of the medical forces

only 36 hours before the Japanese attack, is reported in the current Journal of the American Medical Association.

The death rate of the wounded was only 3.8 per cent. The reasons and new treatments are described by Dr. John J. Moorhead, New York City, a World War I colonel who was in Honolulu delivering a course of lectures on surgery of injuries.

On Friday night, Dec. 5, the lecture was on wounds, civil and military. A large part of the Army and Navy medical personnel attended and in discussion brought themselves up to the minute. They could not have done better if they had picked the hour for the Jap attack.—*Los Angeles Times*, March 4.

The Doctors Are Prepared

Fortunately for the welfare of the American people, the American medical profession was preparing for war long before the bombs fell on Pearl Harbor.

Since June, 1940, the Journal of the American Medical Association points out, the medical profession has been intensively engaged in standardization of military medical procedures, encouragement and promotion of scientific military medical research, and enrollment of medical personnel. More than 10,000 physicians have entered military service, and over 25,000 have given their services, without charge to the Selective Service Boards. Additional thousands of qualified men of medicine are associated with the Army and Navy Medical Corps, the Public Health Service, and other governmental departments of a military or quasi-military nature.

The doctors have shown the highest type of patriotism. On their shoulders falls the vast responsibility of keeping the military and civilian populations mentally and physically fit. They accept that responsibility without reservation. They know the material rewards will be small. Their principal reward will be in the knowledge of a vital public service well done.

The American fighting forces and the American people at large are receiving a kind of medical service unrivaled on earth. No other nation enjoys higher standards of health—and in no other nation are the requirements laid down by the military services so high. The health of our people is one of our greatest weapons. The doctor will play a decisive role in the winning of the war.—*San Francisco Organized Labor*, January 31.

Soldiers Will Be Immunized As Precaution

Men Who Leave Shores Will Get Protection From Numerous Threatening Maladies
(By United Press)

Chicago, Jan. 29.—A circular letter written by the surgeon general of the U. S. army and published in the Journal of the American Medical Association, revealed today that all military personnel going into disease-ridden areas will be immunized against typhus, cholera and bubonic or pulmonic plague.

The letter emphasized the precautionary measures to be taken for the health of American expeditionary forces, which President Roosevelt said may number from six to 10 in all parts of the world.

Cures Lacking

Medical science has little cure to offer for victims of the three dreaded diseases that hover as a threat over areas with poor sanitation, food shortages and widespread devastation. Consequently, the American doughboy will not only be immunized before entering such areas but at regular intervals while stationed there.

"All military personnel stationed in or traveling through Asia, Africa, continental Europe or other areas where danger from epidemic typhus fever exists will be immunized with typhus vaccine as prescribed by the surgeon general," the letter said.

Likewise, soldiers moving through areas infected with cholera or plague will be immunized. Regarding subsequent vaccinations the letter explains that typhus vaccine may be administered every four to six months as long as serious danger of infection is present. The same applies to cholera vaccinations. New vaccinations for bubonic plague will be given "whenever in the opinion of the surgeon additional stimulation of immunity is indicated."—*San Bernardino Sun*, January 30.

State Draft Expected to Hit 600,000

California's week-end draft registrations probably will exceed the 600,000 earlier estimate made by the State's selective service system.

Incomplete reports, showing 146,000 men registered by 75 of the 284 boards, were "slightly above expectations," announced Lieutenant Arthur Powell, public relations officer at Sacramento for the system.

It was reported locally that the San Francisco registrations were expected to exceed 55,000.

More than 9,000,000 are expected to be tallied nationally, which, added to the two previous registrations, would exceed 27,000,000. National officials said the latest registrants would not be called up until previous eligibles had been exhausted. . . .—*San Francisco Chronicle*, February 18.

Army Goes Back to Old Draft System

Men called to the army henceforth will receive army physical examinations the same day they are inducted into armed services, Selective Service headquarters at Washington announced yesterday.

Local Selective Service boards will continue to give "screening" examinations to reject obviously physically unfit men.

The change practically reestablishes the original system of draft and induction procedure, it was reported. Since last November the army has maintained field medical examining stations in scattered communities. These field stations gave the army examination to the selectee then sent him home to wait for his call.

Under the new system the field examining stations will be abandoned. Local board physicians will give the preliminary examination but the final physical examination by army doctors will be administered the day of induction.

Under the new procedure, officers said, registrants will have the same rights of appeal and of personal appearance before their local boards as they have at present.—*San Francisco Chronicle*, February 25.

Donors to Repeat in 49 Days

Research Shows Blood Restored in That Time

Chicago, March 7.—The average healthy man or woman can safely give blood to blood and plasma banks for transfusions every three months, it appears from a report by Dr. Willis M. Fowler and Dr. Adelalde P. Barer of the State University of Iowa College of Medicine to the Journal of the American Medical Association here.

Second, third and subsequent donations to blood banks can be safely given as soon as the hemoglobin, the red coloring matter of the blood, has returned to normal. The average time for this after a donation of about one pint of blood is between 49 and 50 days, the Iowa investigators found from a study of 200 medical students, resident doctors and hospital employees. However, this can only be told by the blood test and the average healthy donor is likely to feel equal to giving a second pint of blood long before this. So, unless the amount of hemoglobin in the donor's blood is determined regularly, the longer interval of three months between blood donations is advised.

Women need a little longer time than men to rebuild their hemoglobin stores, so the intervals between blood donations should be a little longer for them.

Hemoglobin stores are replenished at about the same rate after the fifth donation as after the first.

San Mateo Blood Bank Plans Drawn

Hoping to avert tragedies similar to those which happened at Pearl Harbor when sufficient blood plasma was not available to give victims needing transfusions, the San Mateo County Blood Bank central committee held its first meeting Saturday at Mills Hospital to outline its main objectives and discuss ways and means of raising funds.

To equip and operate a blood bank in San Mateo County will call for a sum of approximately \$15,000, the committee estimated. It is planned to raise the money by a county-wide campaign.

In case of disaster, San Francisco would need its own resources, officials pointed out, and San Mateo County would probably have to depend on its own resources to save lives.

Objectives outlined by the committee, meeting under the chairmanship of Dr. Carl Hoag of Hillsborough, assisted by Mrs. Paul J. Hanzlik, vice chairman and executive secretary, are as follows:

1. To create a blood bank from which all types of blood can be had for transfusions with the least possible delay.
2. To accumulate a reservoir of blood plasma of from 500 to 1000 units, to be held under refrigeration in various parts of the county, available for instant use in case of emergency.

3. To provide the armed forces with blood plasma in excess of the needs of the county.

4. To register and type every man, woman and child in the county and provide each with a card bearing this information insofar as funds and facilities will permit.

Amount of money raised will determine how many residents can be typed for protection in case of disaster, it was pointed out.

Some 12 persons were present at the first committee meeting, and more are expected at the next session, since appointments to the committee have not been completed. It is expected to number about 15 altogether, when the list is completed some time within the next few days.

The blood bank plan was originally proposed by organized labor of San Mateo County and is approved and supported by the San Mateo County Medical Assn., Mrs. Hanzlik reported.—*Burlingame Advance*, March 2.

Bath Is Best Antidote For Mustard Gas

Berkeley, March 16.—The best antidote to contact of the skin with mustard gas or lewisite is plain soap and water, says Dr. Joel Hildebrand, professor of chemistry at the University of California, who served in the Army's Chemical Warfare Service in France during 1918.

"It is far more important to treat the skin promptly than to await some elaborate degassing process," Dr. Hildebrand states.

Dr. Hildebrand performed an experiment on himself to demonstrate the effectiveness of soap and water against mustard gas. The lessons demonstrated were that soap and water are very effective, but that their use must be as prompt as possible to prevent the diffusion of the substance into the skin.

The chemist adds that preliminary oiling of the skin with any oil or grease available, or with kerosene, would add to the effectiveness of the subsequent washing but that this should not be done if search for the oil involves any appreciable delay.

"It is quite possible to contaminate the body by contact with objects previously sprayed with these oily non-volatile liquids," Dr. Hildebrand states. "If, however, the victim has breathed some of the initial spray for even a short period, or breathed air containing the vapor for a good deal longer period, his respiratory tract will be poisoned and, although the initial effects are not painful, he becomes a subject for hospitalization, with absolute rest indicated until he can be taken to a hospital.

"Civilians should never forget, however, that a person indoors with all openings closed, is adequately protected for a long time against such gas concentrations as are likely to be set up outside."—*U. C. Clip Sheet*.

COMMITTEE ON POSTGRADUATE ACTIVITIES†

Annual Postgraduate Conference of the Third Councilor District

At Bakersfield on Saturday and Sunday, March 7th and 8th, members of the Ventura, Santa Barbara, San Luis Obispo, Kings, Fresno, Tulare and Inyo-Mono County Medical Societies participated in the Postgraduate Conference that is annually sponsored by the Kern County Medical Society.

The meetings were held in the Hotel El Tejon, Saturday being given over to presentation and consideration of topics dealing largely with Military Medicine. Members of the Woman's Auxiliaries of the county societies met on Saturday noon, Mrs. Harry Hund, President of the Woman's Auxiliary to the California Medical Association being among those present. On Saturday evening there was a dinner dance in the Spanish Ballroom.

On Sunday morning, a large number of those in attend-

ance met at breakfast to hear reports from State Association officers. President-Elect William R. Molony and Association Secretary-Editor George H. Kress discussed pertinent work in which the State Association was interested.

After breakfast, members adjourned to the golf course.

Dr. Harold A. Fletcher, Chairman of the C. M. A. Committee on Medical Preparedness, and California Representative on the Procurement and Assignment Service, held a meeting with County Procurement Committees of the Third Councilor District on Saturday afternoon.

The scientific program of Saturday follows:

10:00 A.M. *Gas and Chemical Warfare*—Maj. Ted Enter, Chemical Warfare Service, U. S. Army.

11:00 A.M. *Burns*—Dr. Leon Goldman, San Francisco.

12:30 P.M. *Luncheon*—Lt. Col. G. E. Clapp, Medical Corps, U. S. Army, spoke on *The Doctor and the Army* at the luncheon meeting.

2:00 P.M. *Civilian Defense*—Dr. Wallace Hunt, Surgeon U.S.P.H.S., Regional Medical Officer of the OCD. This meeting will be attended by Civilian Defense Council representatives, public officials, Women's Auxiliary and other groups interested in civil defense.

3:00 P.M. *Shock and Hemorrhage: Latest Aspects of Treatment*—Dr. J. B. Harris, Sacramento.

4:00 P.M. *Procurement and Assignment Service*—Dr. Harold Fletcher, San Francisco, Director of the Procurement and Assignment Service in California, discussed the assignment of doctors to both civil and military service.

2 to 5 P.M. *Round Table: Eye, Ear, Nose and Throat*—Dr. Orrie E. Ghris presented subjects of interest to E.E.N.T. men with moving pictures from the Chevalier Jackson Clinic. This was followed by general discussion.

The Stanford University School of Medicine: Popular Medical Lectures

The Stanford University School of Medicine announces the Sixtieth Course of Popular Medical Lectures, (Illustrated), for the year 1942. Lectures will be given at Lane Hall, North side of Sacramento Street, near Webster Street, in San Francisco, on Friday evenings, April 3, April 17, May 1, and May 15, 1942, at eight o'clock sharp. Program follows:

Friday Evening, April 3, 1942—"The Blood Bank: Its Purpose and Uses in War Time."—John R. Upton, M. D.

Friday Evening, April 17, 1942—"Medical Aspects of Civilian Defense."—Anthony J. J. Rourke, M. D.

Friday Evening, May 1, 1942—"Alcohol in Relation to Driving Hazards."—Henry W. Newman, M. D.

Friday Evening, May 15, 1942—"Control of Venereal Disease under War Conditions."—Charles W. Barnett, M. D.

All interested are cordially invited to attend.

Ninth Annual Lecture Course of the San Jose Hospital Association

The San Jose Hospital Association announces its Ninth Annual Lecture Course. The lecture topics relate to "Neoplastic Diseases," and their early clinical diagnosis. Lectures will be given by William Carpenter MacCarty, Sr., M.D., Professor of Pathology, Mayo Foundation, University of Minnesota, Graduate School and Consulting Physician, Mayo Clinic, Rochester, Minnesota.

The lectures will be held on March 23, 24, 25, 26, 27, 1942, in the San Jose Medico-Dental Building Auditorium.

Program follows:

General Subject: Neoplastic diseases (their early clinical diagnosis).

Monday, March 23rd, 8 P.M.—Our General Knowledge of Neoplastic Diseases.

Tuesday, March 24th, 8 P.M.—Gastro-Intestinal Tract.

† Requests concerning clinical conferences, guest speakers, and other information, should be sent to the California Medical Association headquarters office, 450 Sutter, San Francisco, in care of the Association Secretary, who is secretary ex officio of the Committee on Postgraduate Activities.

Wednesday, March 25th, 6:30 P.M.—(Dinner) Hotel Sainte Claire (Ladies invited). Breast, Uterus and Ovaries.
 Thursday, March 26th, 8 P.M.—Kidney, Bladder and Testicle.
 Friday, March 27th, 8 P.M.—Bones, Soft Tissues, Lymph Nodes and Ductless Glands.

All lectures, with the exception of the dinner meeting on Wednesday night, will be given at the San Jose Medico-Dental Building Auditorium.

U. C. Medical Physics Course: Clyclotron

A course in medical physics for undergraduates, the first of its kind ever given in any university, has been instituted at the University of California.

The course, given under the auspices of the department of physics, is designed to teach students the medical and biological aspects of the sciences developed by the atom-smashing cyclotron.

A seminar in medical physics was given last semester and is being continued this spring in the University of California Medical School for doctors. However, this is the first course of its type ever instituted for credit in any university.

It is a recognition of the important contributions of the cyclotron to the sciences. The cyclotron and its radioactive products find wide application in biological and medical research.

The object of the course is to teach young research men in many fields how to use this new tool of science. Lectures for the course are being given by members of the Radiation Laboratory staff.

The artificial radioactive elements produced by the cyclotron are used in learning about the metabolism of plants and animals, and their radium-like qualities make them useful in medicine.

The new Medical Physics Building, in which scientists experimenting with cyclotron products will work, is nearing completion on the Berkeley campus. These facilities and the new course of instruction exemplify the leadership of the University of California in this new field of science.

Pharmacology Seminar—Spring, 1942*

University of California Medical Center, San Francisco

Luncheon at 12 noon on Mondays in the Crummer Room for the History of Medicine, Medical Clinics Building
 Feb. 16—C. D. Leake—War Gases: General; Blast; Nitrous Fumes.

Feb. 23—E. L. McCawley—War Gases: Physiological Types.

Mar. 2—D. F. Marsh—War Gases: Biochemorphology.

Mar. 9—H. R. Hathaway—War Gases: Management of Injury.

Mar. 16—G. A. Alles—Anti-convulsants.

Mar. 23—M. H. Soley—Oxygen Administration at High Altitudes.

Mar. 30—N. W. Karr—New Eserine Substitutes.

Apr. 6—L. A. Strait—Pharmacological Spectroscopy.

Apr. 13—C. D. Leake—Sulfonic Derivatives as Growth Inhibitors.

Apr. 20—J. J. Eiler—Purine Glycosides.

Apr. 27—C. Gurchot—Blood Activation of Papain in Diagnosis.

Doctor Wilbur Sounds Warning in Chicago Against Lower Medical Standards

Chicago, Feb. 16 (AP).—Dr. Ray Lyman Wilbur declared today "there is real danger if we accept an inferior sort of medical attention for our population" during war time.

"Our principal civilian problem will be to save the time of the trained physicians retained at home so that, in spite of reduced numbers, they can give satisfactory and effective scientific care," he said in an address prepared for delivery to the 38th Annual Congress on Medical Education and Licensure.

Dr. Wilbur, chancellor of Stanford University, is chairman of the American Medical Association's Council on Medical Education and Hospitals.

Army Won't Take 'Cultists'

"It is almost inevitable," he said, "that the various cultists, with their cheaper training, will not be used to any extent in meeting the emergencies of war, but that they will be left at home."

"If we permit them to take over in any way the care of a considerable part of our population we are going to pay a heavy price. Epidemics are a normal part of war. . . . If the symptoms treaters who are so commonly being called upon by our peace-time citizens for care are used to any great extent during wartime we must expect marked disturbances of civilian morale."

How Public May Aid

To solve partly the problem of redistribution of adequate medical care, Dr. Wilbur said wherever possible patients must be transported to doctors, not doctors to patients; chronic and convalescent patients will have to be moved out of hospital centers so that acute ailments may be treated with the least expenditure of time and money; more simple medical procedures must be left to practical nurses, that physicians and nurses may devote their time to functions requiring experts.

The Council on Education and Licensure resolved that decisions on adoption of accelerated curricula for medical schools during the war period should be left to the individual schools.—*Palo Alto Times*, February 16.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION†

Chiropractic Activity in Congress

In FLB—8, it was noted that H.R.1052, a bill to permit chiropractors to treat beneficiaries of the United States Employees' Compensation Act, had been referred to a subcommittee of the House Committee on the Judiciary for consideration, composed of Representative Charles F. McLaughlin, Nebraska, Representative Sam Hobbs, Alabama, Representative Dave E. Satterfield, Jr., Virginia, Representative Thomas H. Eliot, Massachusetts, Representative Clarence E. Hancock, New York, Representative Raymond S. Springer, Indiana, and Representative Joseph P. O'Hara, Minnesota.

This subcommittee has recommended to the full Committee that the bill be reported favorably, with an immaterial amendment. The bill as introduced provided, the underscored words being the suggested change in existing law:

"The term 'physician' includes surgeons and osteopathic and chiropractic practitioners within the scope of their practice as defined by State law."

"The term 'medical, surgical, and hospital services and supplies' includes services and supplies by osteopathic and chiropractic practitioners and hospitals within the scope of their practice as defined by State law."

The subcommittee suggested the addition of the words included below in parentheses:

"The term 'physician' includes surgeons and osteopathic and chiropractic practitioners (licensed by State law and) within the scope of their practice as defined by State law."

"The term 'medical, surgical, and hospital services and supplies' includes services and supplies by osteopathic and

† Component County Societies and California Medical Association members should not give endorsements to proposed legislation unless the California Medical Association Committee on Public Policy and Legislation has so requested. On such matters, address: California Medical Association Committee on Legislation, Dwight Murray, M.D., Chairman, 450 Sutter, San Francisco. Telephone, DOuglas 0062.

chiropractic practitioners and hospitals (as licensed by State law and) within the scope of their practice as defined by State law."

The House Committee on the Judiciary has taken no action on the recommendation of its subcommittee.

Evidence of further chiropractic activity in Congress is contained in the following petition printed in the Congressional Record, February 25, page 1717:

"Resolution of the American Bureau of Chiropractic, Inc., Auxiliary No. 17, urging that the President of the United States take cognizance of the situation and take appropriate steps for the permanent creation of a place in the Health Service for chiropractic, either as a part of the present set-up of the Medical Corps or that a separate and distinct chiropractic corps be created to be confined strictly to the administration of chiropractic to soldiers who are in need of that particular type of health service."

This petition was referred to the House Committee on Military Affairs.

COUNTY SOCIETIES†

CHANGES IN MEMBERSHIP

New Members (112)

Alameda County (10)

Bessie Yeen Jeong, *Oakland*
George Edward Koerber, *Oakland*
Alfred M. Palmer, *Oakland*
Roscoe Sherman Pebley, *Oakland*
Charles Erskine Richards, *Oakland*
Paul H. Ryan, *Oakland*
J. M. Sloan, *Oakland*
Warren E. Wiesinger, *Oakland*
Homer R. Wolfson, *Oakland*
Maurice L. Zeff, *Berkeley*

Humboldt County (2)

Fred E. Herzer, *Garberville*
Max A. Todd, *Eureka*

Lassen-Plumas-Modoc County (1)

W. D. Magg

Los Angeles County (52)

Samuel C. Azen, *Roscoe*
J. Tracy Bennett, *Alhambra*
Rudolph W. Besser, *Burbank*
Fred C. Brock, *Burbank*
George Edward Brown, *Los Angeles*
Frank A. Buell, *Los Angeles*
Arthur B. Cecil, *Los Angeles*
Kathryn Teach Cherry, *Los Angeles*
Maurice N. Crakow, *Burbank*
Ralph M. Crumine, *Inglewood*
Benjamin F. Davis, *Los Angeles*
W. Dewey Davis, *Pomona*
Stanley R. Edwards, *Los Angeles*
Carl A. Erickson, *Pasadena*
W. H. Griffith, *Los Angeles*
Ada L. Hatcher, *Los Angeles*
Jennie M. Howell, *Los Angeles*
Edmund Newell Huff, *Pasadena*
Harold I. Jubelirer, *Beverly Hills*
Arthur Y. S. Kim, *Los Angeles*
Stuart Kayland, *No. Hollywood*

Robert J. Kositchek, *Los Angeles*
Nathan Kraemer, *Los Angeles*
Sigrid H. Lauritsen, *Pasadena*
John H. Leary, *Downey*
Charles C. Levy, *Burbank*
Clarence L. Lloyd, *Inglewood*
John J. Mandel, *Los Angeles*
Anetta T. McGuffin, *Glendale*
D. W. McGuffin, *Glendale*
Edward B. Merchant, Jr., *Pasadena*
Henry Gordon Morgan, *Los Angeles*
N. Muskin, *Los Angeles*
Jackson, Norwood, *Pasadena*
Maximilian E. Obermayer, *Los Angeles*
Griffith D. Page, *Los Angeles*
John Richard Paxton, *Los Angeles*
William J. Pitlick, *Pasadena*
Wendell M. Redfern, *Glendale*
Delbert F. Rey, *Glendale*
Herman Irving Riddell, *Los Angeles*
Fritz Riesenfeld, *Los Angeles*
J. Margaret Roberts, *Los Angeles*
M. John Rowe, Jr., *Long Beach*
Gerald William Shaw, *Santa Monica*
Leon J. Shulman, *Los Angeles*
Frank Everett Stanton, Jr., *Long Beach*
John H. Stark, *Los Angeles*
Harry A. Tanton, *Inglewood*
George N. Thompson, Jr., *Whittier*
Yoshiye Togasaki, *Alhambra*
Joseph A. Walshe, *Pasadena*

Riverside County (2)

Fred D. Lord, *Arlington*
E. Danford Quick, *Riverside*

San Bernardino County (4)

Marcus Ching, *Victorville*
G. Fred Jarrad, *Fontana*
Karl F. Pelka, *San Bernardino*
William T. Williamson, *Colton*

San Diego County (8)

C. Wm. Bruner, *National City*
Lorin Wayne Denny, *San Diego*
Frederick H. Fehlmann, *San Diego*
Martin P. Koke, *San Diego*
Purvis L. Martin, *San Diego*
Nelson T. Murray, *San Diego*
J. J. Prendergast, *San Diego*
John L. Steffy, *San Diego*

San Francisco County (23)

Allen A. Altman, *San Francisco*
Daniel W. Boudett, *San Francisco*
Wm. M. Cameron, *San Francisco*
Douglas Gordon Campbell, *San Francisco*
Otis Raymond Craft, *San Francisco*
Edward R. Cullen, *San Francisco*
Frederick Gary Dutton, *San Francisco*
Edward Forde Flinn, *San Francisco*
Lee Daniel Fulton, *San Francisco*
Gilbert Saul Gordan, *San Francisco*
Eugene S. Hopp, *San Francisco*
Francis Emmert Howard, *San Francisco*
Herbert A. Hughes, *San Francisco*
Alvin Hirsch Jacobs, *San Francisco*
Herbert Kulka, *San Francisco*
Corinna Kurvinen, *San Francisco*
John Herbert Leimbach, Jr., *San Francisco*
Paul Felix Lestrohan, *San Francisco*

†For roster of officers of component county medical societies, see page 4 in front advertising section.

Sali Oppenheimer, *San Francisco*
 Wm. H. Rustad, *San Francisco*
 Robert W. Tufft, *San Francisco*
 Ernest E. Wald, *San Francisco*
 Leon J. Whitsell, *San Francisco*

Santa Clara County (6)

Franz W. Baumann, *San Jose*
 Dominic A. Campisi, *San Luis Obispo*
 Ralph D. Cressman, *Palo Alto*
 Herbert W. Jenkins, *Palo Alto*
 Sidney P. Mitchell, *Palo Alto*
 Richard O. Pfaff, *San Jose*

Solano County (1)

Charles Henry Widenmann, *Vallejo*

Sonoma County (1)

John A. Fowlie, *Santa Rosa*

Stanislaus County (1)

Vincent Vielhaber, *Patterson*

Yuba-Sutter-Colusa County (1)

Irving D. Johnson, *Marysville*

Transfers (9)

Elmo Alexander, from Orange County to Stanislaus County
 George B. Armanini, from Tulare County to Santa Clara County
 Earle Addison Casey, from Placer-Nevada-Sierra County to Alameda County
 Harry P. Howard, from Monterey County to San Francisco County
 Eric E. Rosenberg, from San Francisco County to San Joaquin County
 Roy William Thomas, from San Francisco County to Shasta County
 Ethel Maurice Walker, from Napa County to Los Angeles County
 Francis Edwin West, from San Francisco County to San Diego County
 Julius Zelman, from San Joaquin County to San Bernardino County

Retired Members (4)

Eva L. Harris, *Alameda County*
 Marjory J. M. Potter, *San Diego County*
 Will Hale Potter, *San Diego County*
 Charles W. Yerxa, *Los Angeles County*

Life Members (1)

A. Bennett Cooke, *Los Angeles County*

Associate Members (2)

Alexander D. Barclay, *Riverside*
 John Vernon Smith, *San Francisco*

In Memoriam

Alexander, Archibald Addison. Died at Oakland, January 17, 1942, age 62. Graduate of the University of California Medical School, 1907. Licensed in California in 1907. Doctor Alexander was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

Bachelder, Bayley Burton. Died at Sebastopol, February 25, 1942, age 63. Graduate of Hahnemann Medical College of the Pacific, San Francisco, 1914. Licensed in California in 1922. Doctor Bachelder was a member of the Sonoma County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

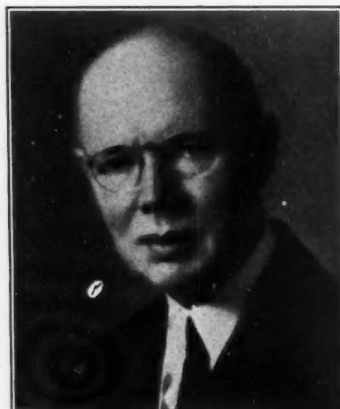
Hunter, Thomas Van. Died at Los Angeles, January 22, 1942, age 66. Graduate of McGill University Faculty of Medicine, Montreal, 1906. Licensed in California in 1925. Doctor Hunter was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Lohnberg, Ernst. Died at San Francisco, February 14, 1942, age 57. Graduate of Rheinische Friedrich-Wilhelms-Universität Medizinische Fakultät, Bonn, Prussia, 1910. Licensed in California in 1937. Doctor Lohnberg was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Spriggs, Gertrude Anna. Died at Lomita, December 30, 1941, age 78. Graduate of College of Physicians and Surgeons of San Francisco, 1900. Licensed in California in 1900. Doctor Spriggs was a retired member of the San Francisco County Medical Association, the California Medical Association, and the American Medical Association.

Tickell, Alfred H. Died at Nevada City, January 28, 1942, age 78. Graduate of Southern Medical College, Atlanta, Georgia, 1891. Licensed in California in 1892. Doctor Tickell was a retired member of the Placer-Nevada-Sierra County Medical Society, the California Medical Association, and the American Medical Association.

OBITUARIES



Charles Alfred Dukes
 1872—1942

Charles Alfred Dukes—eminent surgeon, loyal and sympathetic friend, true American. His community and

the great profession he so ably represented for over forty years bow their heads in reverent memory to his name. It will not be forgotten.

Born in most modest circumstances, by his honesty of purpose and singular devotion to his beloved profession, he rose to the top, a place reserved only for the very few. To those of us who were privileged to work with him through the years and who loved him, he represented the highest ideals of American medicine, an inspiration to all. His blameless and harmonious home life, where he was worshipped by his wife and daughters, helped to sustain his hand in the hours of trial and sorrow that come to all of us.

Eminent surgeon though he was, he remained at heart the real American family doctor, kindly, honest, tolerant and compassionate. Of the thousands who came to his door seeking help and advice, rich and poor alike, none was turned away. Of men like him it may truthfully be said that the world is better that they were here.

The highest honors bestowed on him by a grateful profession were borne with dignity and humility. In his relations with his colleagues and the public at large he conducted himself at all times and under all circumstances as a gentleman and a doctor. In the late autumn of a long and useful life, when his country in its hour of need called upon him for further service and sacrifice, he redoubled his efforts and gave of himself unstintingly until the end. And when at last the Great Physician came, as he comes to all men, and summoned him to "that House not made with hands, eternal in the Heavens" he went smilingly—and unafraid.

WHITFIELD CRANE.

Charles Alfred Dukes, M. D., F. A. C. S.

Born, Iowa, April 23, 1872.

Preliminary Education, Schools of Iowa, and Drake University.

Graduate of Cooper Medical School, 1895.

Steamer Surgeon for three years.

Transport Surgeon, Spanish American War, 1898.

Married Mabel Saxe, 1899. Children: 2 girls.

Postgraduate Course, New York University, 1899.

Practiced medicine in Oakland since 1899.

President, Alameda County Medical Society, 1912.

Past Vice-President, American College of Surgeons.

Chairman, Cancer Committee, American College of Surgeons.

Past President of California Medical Association.

C. M. A. Member to A. M. A. House of Delegates.

Chairman, Cancer Commission, California Medical Association.

Chief, Gynecological Staff, Samuel Merritt Hospital, for 20 years.

Consultant, Gynecological Staff, Samuel Merritt Hospital, 1941.

Chief, West Surgical Service, Alameda County Hospitals.

Consultant, Highland, Alameda County Hospital, 1941.

Chief, Cancer Clinic, Highland Hospital.

Consulting and Chest Surgeon, Veterans Administration, Livermore.

American Board of Surgery, Licentiate. (Member of the Founder's Group)

Vice-President, American Medical Association.

Chairman, Ninth Corps Area, Federal Procurement and Assignment Service.

Archibald Addison Alexander

1874—1942

It is well for men to pause from time to time to evaluate the things by which they live and grow, the things that round out a life and make it a happier one. The Psalmist has well said that man does *not* live by bread alone. He lives in the love of home and family, in the ability and opportunity to work for those he loves, in the esteem and confidence of his colleagues and in the friendships that he makes. Regarding friendship, Robert Hall once said: "A faithful and true friend is a living treasure, inestimable in possession and deeply to be lamented when gone. Nothing is more common than to talk of a friend; nothing more difficult than to find one; nothing more rare than to improve by one as we ought. A friend should be one in whose understanding and virtue we can equally confide, and whose opinion we can value at once for its justness and sincerity. He who has made the acquisition of a judicious and sympathizing friend may be said to have doubled his mental resources." Tonight, we of Merritt Hospital Staff are saddened by the loss of such a friend; for Arch Alexander has left us. Yet, why should we mourn, except from the selfish reason of our own sense of loss. Man's gradations of time are infinitesimal when measured by eternity. So, what matters the time of a man's departure, if his life has been full and complete? Years alone do not make sages, they only make old men.

The years to Doctor Alexander did not simply increase his age, they added to his inexhaustible fund of knowledge, to his wisdom, to his understanding sympathy and to his charity in the judgment of men's weaknesses. He lived a full and understanding life. By the nature of his profession he was many things to many men. As a citizen he appreciated his privileges and assumed his responsibilities. As a husband he was the only kind that his love for his wife, his kindly sympathy, and his sense of fairness, would allow him to be—a good one. As a physician he brought to his patients a mind stored with medical knowledge and a sound mature judgment. When death could not be stayed he tempered the physical suffering, and with his sympathy and kindness strengthened a faltering courage. He robbed death of its sting and the grave of its victory.

To his fellow physicians, he was courteous and considerate, and they honored him with high office in their organizations and a chair at their council tables. But, the young doctors were his joy. He gave freely to them of his time and knowledge. He instructed them both in the science and the art of medicine. He rejoiced with them in their triumphs, and sorrowed with them in their failures.

So, fate decreed that Arch Alexander should run the span of his life in sixty short years. Years that were full of the joy of living and of serving. There remains one attribute that he possessed in full measure that I have not mentioned. Courage. He lived bravely and died courageously. For six months he walked side by side with death and had no fear. Sustained by the love of his wife he asked no other aid. And now he is gone. Henry Ward Beecher has written: "When the sun goes below the horizon it is not set; the heavens glow a full hour after its departure.—And when a good man dies, the sky of this world is luminous long after he is out of sight.—Such a man can not die out of this world. When he goes he leaves behind much of himself. Being dead he speaks." This I know is true of Arch Alexander. He has influenced, for good, the life of every man in this room. For myself, I know I have lived a happier and better life from having had him as a friend. Who knows but, some day, I may be able to tell him so?

WILLIAM L. CHANNEL.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. HARRY O. HUND.....President
MRS. RENE VAN DE CARR.....Chairman on Publicity
MRS. ROSSNER GRAHAM...Asst. Chairman on Publicity

News Items

Haddon Hall will be headquarters for the meeting of the Woman's Auxiliary to the American Medical Association, to be held in Atlantic City, New Jersey, June 8th to 12th, 1942.

Requests for reservations, therefore, should be sent to Haddon Hall, Atlantic City, New Jersey.

1 1 1

The February meeting of the Alameda County Auxiliary was held at the Claremont County Club, with over 100 members and guests present.

Miss Beatrice Carpenter, Nutritionist for the California Dairy Council, spoke on that subject, which is of vital importance to everyone at this time. Carol Mills, violinist, a graduate of the Royal Conservatory of Brussels, played several solos.

Heretofore many of the Auxiliary members have been working in the various departments of the Red Cross. The Auxiliary now has several of its own units. Sixty members are in the First Aid class, which is under the instruction of Doctors Dorothy M. Allen and Helen Snook.

A Red Cross sewing unit of twenty members are plying the needle one day a week at the work rooms of the Singer Sewing Machine Company, which furnishes the machines and an all-day instructor. This group is under the direction of Mrs. Kenneth Neilso and Mrs. W. W. Cross.

1 1 1

Los Angeles County Auxiliary held its January meeting at the Hollywood Roosevelt Hotel, with over a hundred members present. Mrs. Harry O. Hund was guest of honor and spoke on the responsibilities and projects of the Auxiliary, and stressed need of coöperation in the defense program.

Other honored guests were Dr. William R. Molony, Sr., President-elect of the California Medical Association, Dr. John C. Ruddock, President of the Los Angeles County Medical Association, and Dr. Philip Stephens, member of the Board of Trustees of the Los Angeles County Medical Association.

The guest speaker was Mr. Geoffrey F. Morgan, of the Public Relations staff of the Douglas Aircraft Corporation, who gave a timely talk on "Aviation and the National Defense."

1 1 1

Since last reported, Marin County has had two meetings. At the early December meeting, Helen Van Cleve Parks gave a talk on color harmony and values.

The January meeting was held at Blue Rock Hotel in Larkspur, with twenty-seven members attending. Mrs. Ada Fusselman, guest speaker, gave a talk on "Defense from a Woman's Point of View."

The meeting was honored by the presence of Mrs. Harry O. Hund, State President, and Mrs. Frank A. Lowe, State Corresponding Secretary.

† Reports of county chairmen of publicity should reach Mrs. Rossner Graham, Assistant Chairman of Publicity, 6101 Acacia, Oakland, by the tenth of the month previous to publication. Address of the Chairman of Publicity: Mrs. Rene Van de Carr, 51 Prospect Road, Piedmont. For roster of state and county officers, see page 6, in front advertising section.

Sixty-seven members of the San Diego Auxiliary met for the January meeting at luncheon at the University Club.

Captain M. D. Willcutts, M. C., who is Chief of Service at the Naval Hospital, gave a talk on the Blood Bank. The Auxiliary is working with the San Diego Medical Association in establishing a Blood Bank in San Diego for civilian defense.

Mr. Quon, Chinese lecturer and writer, and graduate in electrical engineering of the University of Chicago, spoke on "America's Position in the Pacific." He ended his talk with a reading of the new Chinese national anthem.

Mrs. Whitehouse explained the Basic Science Law. Each member is to be given a petition for signatures.

1 1 1

The San Francisco Auxiliary held a very interesting meeting in January, with Dr. Ernest G. Sloman, Dean of the Physicians and Surgeons Dental College, as guest speaker. His subject was "Mouth Health, a National Problem."

Mrs. Ambrose Diehl, Chairman Volunteer Special Services of the American Red Cross, also addressed the meeting. Guests were permitted at this meeting, which was of general interest to the public.

Nearly all of the membership is engaged in some activity with National Defense. On Christmas day, those who are members of the Motor Corps did valiant work when so many evacuees reached San Francisco. They spent long hours on the docks waiting to transport people to hotels, hospitals, and the various clubs which had facilities to receive such cases. The usual pleasures of the Christmas Season were cheerfully set aside when this need arose.

Many of the members are taking instruction in First Aid and at Nutrition classes, while others in the Mobile Canteen go out in station wagons to feed soldiers who are guarding different parts of the city.

1 1 1

The January meeting of the Santa Barbara Auxiliary was a luncheon meeting with 47 members attending. Among them were wives of army doctors connected with Hoff Hospital. These ladies have been received as associate members and granted the privileges of the Auxiliary.

There will be no meeting in February, as the State Board is scheduled to meet in Santa Barbara on February 13th and 14th. Time will be devoted to entertaining the visiting ladies, including the National President, Mrs. R. E. Mosiman, and the State President, Mrs. Harry O. Hund.

The annual bridge tea is planned for March. War work continues, with contributions sent to the Red Cross to purchase wool.

The Girl Scout tea which was held in November and sponsored by the Auxiliary, cleared forty-two dollars. The Girl Scouts also gave a Christmas Carol program and were entertained by a supper following the program.

CALIFORNIA PHYSICIANS' SERVICE†

Beneficiary Membership

September, 1939.....	1,220
March, 1940.....	9,322
September, 1940.....	17,398
March, 1941.....	24,107
September, 1941.....	30,071
December, 1941.....	41,295

C. P. S. membership rolls are beginning to show the effect of changes of policy adopted by the Board of

Trustees of C. P. S. last September. Since November, 1941, C. P. S. has acquired 7,573 new members under the limited surgical contract. These members are, generally speaking, the lower income people employed in large industrial plants. Experience with this new group should begin to balance up the unsatisfactory experience C. P. S. has had with the original "full coverage" contract.

However, there are still 32,183 full coverage contracts in force with the majority of the holders having a year's membership. This is the group which up to now has given C. P. S. its experience with the problems involved in a prepaid medical plan. In the very near future some actuarial material should be available on experience under the more limited contract.

Thus C. P. S. is experimenting with four distinct groups; (1) full coverage, (2) two-visit deductible, (3) surgical coverage, and (4) the family contract applicable to rural families. These experiments are being carried on, not in theory but in a practical day-to-day operation, and in sufficient volume to develop information needed to finally shape a definite policy for the future.

Comments have been made that the growth of C. P. S. has been slow. This has been offered as a criticism of the plan. The Board of Trustees of C. P. S. believes that slow conservative growth in the unknown field of developing medical plans is healthy. It gives time for the medical profession to watch its experiment closely for mistakes, and to correct them before they get too big.

Dr. Larsen, Secretary of C. P. S., will attend the Conference of Medical Service Plans to be held in Chicago Saturday, February 14, and will have an opportunity to compare C. P. S. with similar plans operating in other parts of the United States. A report will be made to the professional members of C. P. S. early in March.*

MEDICAL EPONYM

Legg-Calvé-Perthes's Disease

This condition was first described as an entity by Arthur T. Legg (1874-1939) when he was junior assistant surgeon at the Children's Hospital, Boston, in a paper read at the annual meeting of the American Orthopedic Association in June, 1909. The paper was published under the title, "An Obscure Affection of the Hip-Joint," in the *Boston Medical and Surgical Journal* (162:202-204, 1910). The author reported five cases, with x-ray photographs, and said:

"... the following facts . . . are observed:

- "(1) Age, five to eight years.
- "(2) History of injury.
- "(3) Limp.
- "(4) Thickening about the neck of the femur.
- "(5) Absence of pain.
- "(6) Absence of constitutional symptoms.
- "(7) Little or no spasm.
- "(8) Absence of shortening. . .

"We have considered a group of cases all presenting practically the same conditions . . . which are to my mind atypical of any condition heretofore described. . . . I make no claim to any definite conclusion."

Jacques Calvé, while assistant surgeon of the marine hospital at Berck, wrote a paper, entitled "Sur une forme

particulière de pseudo-coxalgie greffée sur des déformations caractéristiques de l'extrémité supérieure du fémur [A Special Form of Pseudotuberculosis of the Hip, with Characteristic Deformities of the Upper Extremity of the Femur]," which appeared in the *Revue de Chirurgie* (42:54-84, 1910). A portion of the translation follows:

"In the past three years, I have had the opportunity of seeing 10 cases of chronic arthritis of the hip that ran a distinctly typical course and were clearly defined both clinically and radiographically, not corresponding to any type previously described and at first considered to be coxalgia, from which they differed in several respects.

"As may be seen on reading the notes that we have given at the end of this article and from the examination of the radiographic pictures that accompany them, the chief characteristics of these arthritides are:

"(1) Signs of a reaction about the joint, running a chronic or subacute course and healing without any limitation of motion.

"(2) Bony deformities preceding these articular symptoms and persisting after their disappearance. These are:

"(a) Coxa vara.

"(b) Hypertrophy of the head of the femur.

"(c) Atrophy and lamellar deformity of the center of ossification of the head.

"(d) Complete absence of bony destruction. . .

"These arthritides . . . occur in young subjects between the ages of three and one-half and ten years."

In 1913, Professor Georg Perthes (1869-1927), director of the surgical clinic at Tübingen, delivered an address, "Ueber Osteochondritis deformans juvenilis [On Osteochondritis Deformans in Young Persons]," which was published in the *Archiv für klinische Chirurgie* (101:779-807, 1913). He stated that several observers had reported cases of this condition, mentioning his own observation in the *Deutsche Zeitschrift für Chirurgie* (107:111-159, 1910), under the title "Ueber Arthritis deformans juvenilis [Concerning Arthritis Deformans in Young People]," but apparently was unfamiliar with Legg's description. He stressed the value of recognizing the nontuberculous nature of the condition. A portion of the translation follows:

"In this disease, which I should like to discuss here as 'osteochondritis deformans of the hip in young persons,' we are dealing with a peculiar wasting away of the upper epiphysis of the femur, which originates in a subchondral focus of destruction and is complete only after a course of some years. . . . After careful studies, and as the result of work done in company with my assistant, Dr. Schwarz, I have arrived at the opinion that in these cases we are dealing with a disease process fundamentally different from the arthritis deformans of adults, and also that the other conception which exists in regard to this condition, namely that it is a tuberculous affection of the upper femoral epiphysis, is not justified. We are rather dealing with a peculiar, unique process, which regularly leads to a characteristic clinical picture and apparently is self-limited."

A careful and detailed description of the condition follows, with case histories and x-ray pictures.—R. W. B., in *New England Journal of Medicine*, Vol. 225, No. 23.

Stating that physical fitness not only of military men and defense workers will be among the important factors in determining the effectiveness of our own defense effort, Dr. Ray Lyman Wilbur, former Secretary of the Interior and president of the American Social Hygiene Association, warned America that the nation's defense also depends on a healthy civilian population. . . .

* Address: California Physicians' Service, 153 Kearny Street, San Francisco. Telephone EXbrook 0161. A. E. Larsen, M. D., Secretary.

Copy for the California Physicians' Service department in the OFFICIAL JOURNAL is submitted by that organization.

For roster of nonprofit hospitalization associates in California, see in front advertising section on page 3, bottom left-hand column.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-Five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.†

California Medical Association, Hotel Del Monte, Del Monte, California, May 4-7, 1942.

American Medical Association, Atlantic City, June 8-12, 1942.

California Heart Association, Hotel Del Monte, Sunday, May 3, 1942.

California Physicians' Service, Hotel Del Monte:

Board of Trustees will meet on Sunday, May 3, at 3:30 P.M.

Administrative Members will hold annual meeting on Tuesday, May 5. Luncheon Meeting, 12:15 P.M.

The Platform of the American Medical Association

The American Medical Association advocates:

1. The establishment of an agency of Federal Government under which shall be coordinated and administered all medical and health functions of the Federal Government, exclusive of those of the Army and Navy.
2. The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health, and the care of the sick on proof of such need.
3. The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.
4. The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.
5. The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.
6. In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.
7. The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability.
8. Expansion of public health and medical services consistent with the American system of democracy.

American Medical Association Broadcasts.—*Doctors at Work*, the dramatized radio program broadcast by the American Medical Association and the National Broadcasting Company went on the air for its second season,

beginning December 6, 1941, from 5:30 to 6 p. m., Eastern Standard time (4:30 to 5 p. m., Central Standard time; 3:30 to 4 p. m., Mountain Standard time; 2:30 to 3:30 p. m., Pacific Standard time.) The program will be broadcast on upward of seventy-five stations affiliated with the Red network of the National Broadcasting Company and will be heard from coast to coast.

Doctors at Work, a successful, serialized story broadcast last year, dealt with the experiences of a fictitious but typical American boy choosing medicine for his vocation and proceeding to acquire the necessary education and hospital training for the private practice of medicine. Interwoven with the personal story of young Dr. Tom Riggs and his fiancée, Alice Adams, was the romance of modern medicine and how it benefits the doctor's patients.

The new series of broadcasts will resume where last year's story left off, namely, with the marriage of Tom Riggs and Alice Adams, and the subsequent life of a young doctor and his wife in time of national emergency in a typical, medium-sized, American city.

The program will be produced under the supervision of the Bureau of Health Education of the American Medical Association, W. W. Bauer, M. D., Director. Scripts will be by William J. Murphy of the National Broadcasting Company, author of such successful radio productions as "Flying Time," "Cameos of New Orleans," "Your Health," "Medicine in the News," and last year's "Doctors at Work." The scripts will again be produced by J. Clinton Stanley, and the National Broadcasting Company orchestra will be under the direction of Joseph Gallichio as heretofore. Actors will be drawn from the well-known group of Chicago radio actors previously heard in American Medical Association and other successful broadcasts.

The program will be available to all stations affiliated with the Red network of the National Broadcasting Company. Announcements should be sought in local newspaper radio columns, under the title "Doctors at Work," or possibly "American Medical Association" or, in some instances, "Health Broadcasts." Evidence of local interest in the program may be the determining factor in whether a local station takes this educational, sustaining feature or sells its time to a local revenue-producing program. Physicians and friends may wish to write to local stations in commendation of the programs.

Medical Broadcasts*

Los Angeles County Medical Association:

The following is the Los Angeles County Medical Association's radio broadcast schedule for the month of March, 1942:

Saturday, March 7—KFAC, 8:45 a.m., Your Doctor and You.

Saturday, March 7—KFI, 11:00 a.m., The Road of Health.

Saturday, March 14—KFAC, 8:45 a.m., Your Doctor and You.

* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

† In the front advertising section of *The Journal of the American Medical Association*, various posters of national officers and organizations appear each week, each list being printed about every fourth week.

Saturday, March 14—KFI, 11:00 a.m., The Road of Health.

Saturday, March 21—KFAC, 8:45 a.m., Your Doctor and You.

Saturday, March 21—KFI, 11:00 a.m., The Road of Health.

Saturday, March 28—KFAC, 8:45 a.m., Your Doctor and You.

Saturday, March 28—KFI, 11:00 a.m., The Road of Health.

Annual Meeting of Tuberculosis Associations.—

Two outstanding Eastern medical men, Dr. J. Burns Amberson, Jr., of New York and Dr. Henry C. Sweany of Chicago, are to be guest speakers at the meeting of the California Tuberculosis Association and the California Trudeau Society convening at the Ambassador Hotel in Los Angeles, April 9, 10 and 11.

Dr. Amberson is clinical professor of medicine at Columbia University School of Medicine, chest specialist at Bellevue Hospital and one of the board of editors of the American Review of Tuberculosis. He is the author of a number of books and treatises on clinical tuberculosis.

Dr. Sweany is medical director of the Chicago Municipal Sanitarium and in charge of the research laboratory of communicable diseases. He also is widely known for writings on tuberculosis.

A feature of the meeting at Los Angeles will be the clinical conference at Olive View Sanatorium where visitors will be shown the procedures in diagnosis and treatment of cases as well as the care of tuberculous patients. The clinical conference is scheduled for Thursday, April 9th.

In the evening of April 9th, there will be held the annual x-ray symposium. At this symposium, cases will be reviewed with case histories, diagnoses and comparison with the autopsy or biopsy findings. The symposium will be open to physicians only.

The symposium will be preceded by the annual dinner open to members of the California Trudeau Society, Pacific Roentgen Society and Los Angeles County Medical Association. The dinner is sponsored by the Los Angeles Trudeau Society.

Bonds or Bondage.—We here in the Pacific area know that today's war is *our* war—one which America must fight to the finish. The battle-line reaches down to every office, factory, and home in the United States.

As doctors we have already shown our eagerness to put our training, experience, and our zeal at the service of the millions in the armed forces. We are also a part of the united civilian army which must provide money, the sinews of war. We must buy Defense Bonds steadily, systematically from now on until success crowns the Nation's mighty war effort.

There are registered, interest-bearing Defense Savings Bonds for individuals, groups, and associations. There are bonds for as little as \$18.75 and for as much as \$10,000. Defense Stamps cost from 10c to \$5.00, and each additional Stamp builds toward the purchase of a Bond.

The cost of our all-out effort for Victory is and will be tremendous. Each of us must lend dollars to the Government that our men in uniform will be assured the necessary tools of war.

Deferment of Income Tax Returns and Payments for Persons in Military Service.—House and Senate conferences have reached an agreement on a bill, H.R. 6446, one section of which postpones the time for the filing of income tax returns and the payment of federal income taxes by persons in military service and by certain other persons.

This section provides, as agreed to in conference, that in the case of any taxable year beginning after December 31, 1940, no federal income tax return of or payment of any federal income tax by

(a) any individual in the military or naval forces of the United States, or

(b) any civilian officer or employee of any department who, at the time any such return or payment would otherwise become due, is a prisoner of war or is otherwise detained by any foreign government with which the United States is at war, or

(c) any individual in the military or naval forces of the United States serving on sea duty or outside the continental United States at the time any such return or payment would otherwise become due

shall become due until one of the following dates, whichever is the earliest:

(1) the fifteenth day of the third month following the month in which he ceases (except by reason of death or incompetency) to be a prisoner of war, or to be detained by any foreign government with which the United States is at war, or to be a member of the military or naval forces of the United States serving on sea duty or outside the continental United States, as the case may be, unless prior to the expiration of such fifteenth day he again is a prisoner of war, or is detained by any foreign government with which the United States is at war, or is a member of the military or naval forces of the United States serving on sea duty or outside the continental United States.

(2) the fifteenth day of the third month following the month in which the present war with Germany, Italy and Japan is terminated as proclaimed by the President; or

(3) the fifteenth day of the third month following the month in which an executor, administrator, or conservator of the estate of the taxpayer is appointed.

This section applies to any person in the Army of the United States, the United States Navy, the Marine Corps, the Army or Navy Nurse Corps (female), the Coast Guard, the Coast and Geodetic Survey, and the Public Health Service. It applies, too, to persons beleaguered or besieged by enemy forces as well as to persons in the hands of the enemy.

Amos Christie, M. D., Goes to Washington.—Dr. Amos Christie of San Francisco who has been a member of the California State Board of Health for the past two years has resigned and left for Washington, D. C., where he will be associated with the National organization of the American Red Cross. Dr. Christie has been connected with the Medical School of the University of California, San Francisco, for many years.

James F. Rinehart, M. D., Appointed to Board.—Dr. James F. Rinehart of the University of California Medical School, San Francisco, was appointed by Governor Olson, February 5, 1942, as a member of the California State Board of Public Health to succeed Dr. Amos Christie, who is now with the American Red Cross in Washington, D. C.

Pharmacological Items of Potential Interest to Clinicians:

1. *More New Books:* R. P. Strong rewrites Stitt's popular *Tropical Medicine* in two volumes (Blakiston, Philadelphia, 1942). G. L. Jenkins and W. H. Hartung issue useful *Chemistry of Organic Medicinal Products* (Swift, St. Louis, 1941, mimeograph). Some neat mimeo reprints from Burgess at Minneapolis are H. H. Shepard's *Chemistry and Toxicology of Insecticides*, and C. A. Elvehjem and P. W. Wilson's *Respiratory Enzymes*. 6th edition Sollmann's *Manual of Pharmacology* (Saunders, Philadel-

phia, 1942) remains same useful reference. E. S. J. King of Melbourne writes excellent *Surgery of the Heart* (Wood, Baltimore, 1941). D. W. Jolly summarizes *Field Surgery in Total War* (Hoeber, New York, 1941). C. J. S. Thompson reviews *History and Evolution of Surgical Instruments* (Schuman, New York, 1942). F. F. Nord and C. H. Werkman issue 2nd volume *Advances in Enzymology* (Interscience, New York, 1942). H. R. Rosenberg's *Chemistry and Physiology of the Vitamins* appears in March.

2. **Chemotherapy:** Comprehensive symposium on mode of action of chemotherapeutic agents held at Middlesex Hospital, London, is summarized in December 20th issue of *Nature* (148:757, 1941). J. S. Harris and H. I. Kohn (*J. Pharmacol., Exper. and Therap.*, 73:383, 1941) note that methionine antagonizes low concentrations of sulfonamides, while p-amino-benzoic acid antagonizes all concentrations. D. R. Climenko, O. W. Barlow and A. W. Wright (*Arch. Path.*, 32:889, 1941) recommend alkalinizing urine with NaHCO_3 to prevent renal lesions from sulfathiazole. B. Witlin (*Proc. Soc. Exper. Med.*, 49:27, 1942) recommends egg injection method for bactericidal appraisal; keen idea for chemotherapy studies.

3. **Notes:** J. Flox et al. report a colorimetric method for estimation of diodrast and hippuran in blood and urine; these compounds have highest clearances for human kidney of any substances known (*J. Biol. Chem.*, 142:147, 1942). G. H. Bell, D. P. Cuthbertson and J. Orr (*J. Physiol.*, 100:299, 1941) find no increase in strength or size of bone on diets above 0.36 per cent calcium, with adequate utilization for bone at much lower concentrations; heridity factors important; bone is elastic to moment of breaking and about as strong as cast iron.

4. **More Tooting Our Own:** D. Marsh finds that the symmetrical ether optimum for inhalation anesthesia on basis of safety factor and explosibility is di-n-propyl ether. N. Karr has evidence suggesting that m-iso-propyl-p-dimethylamino-phenol-dimethyl-urethane methiodide may be a satisfactory substitute for physio-stigmine. M. Soley and M. W. Shock report that low oxygen tension adds significantly to respiratory stimulation from carbon dioxide. B. McIvor, H. H. Anderson, and F. P. Luduena note that sulfacridine and promin greatly prolong life of animals infected with virulent *Trypanosoma cruzi*, but without "cure" since Donovan bodies occur in heart muscle of survivors on sacrifice. C. Gurchot and M. Joseph find that blood activation of papain is reduced in active tuberculosis, early pregnancy, and untreated malignancy, but not in a variety of other diseases. J. Campbell offers evidence showing the antiseptic advantages of high boiling cresylic acids prepared in a manner similar to saponified solution of cresol USP XI. Charles Pecher's (1912-1941) work on Ca^{45} and Sr^{90} as summarized by J. H. Lawrence and J. G. Hamilton, shows one-third calcium lactate orally absorbed; bone concentration of newly absorbed salts 100 greater in bone than soft tissues; excretion both in urine and feces; since half-life Sr^{90} is 55 days, single injection enough to show clinical effect in metastatic bone cancer. P. G. Fuerstner notes that Pitresin injections may cause inflammatory reactions in fallopian tubes and ovaries. E. L. McCawley finds that 2-chloro-2-butene is much safer solvent than 1,2-dichloroethane. H. H. Anderson wisely air-mailed in November from Peking results of research since August: Di-bromohexylresorcinol effective anthelmintic orally without any danger from local irritation; diethylacetyl-piperidinebiuret is a potent hypnotic; chloro-meta-hexyl-cresol is a highly effective larvacide.—U. C. Pharmacologic Department.

Press Clippings.—Some news items from the daily press on matters related to medical practice follow:

Opinion Bans School Nurses From Giving Medical Treatments

A school district does not have the legal authority to permit the school nurse to give treatment to students even though such treatment is by agreement with and supervised by the student's physician.

This is the ruling of Attorney General Earl Warren to District Attorney Laurence W. Carr of Shasta County, who had sought an opinion on behalf of the board of trustees of the Shasta Union High School.

In the case at point it was proposed that the school nurse would administer injections at school for treatment of thyroid gland trouble under the direction of the student's physician who would not personally be present.—*Sacramento Bee*, February 14.

California Law Does Not Ban Medical Licenses For Aliens

Attorney General Earl Warren today advised the state board of medical examiners the issuance or renewal of doctors' licenses for enemy aliens in California is not prohibited by either state or federal regulations.

The opinion, requested by Dr. Charles B. Pinkham, secretary-treasurer of the board, also held no action taken thus far by congress or the president invalidates existing licenses held by enemy aliens, unless the licensed activities are prohibited to such nationals by federal law.

A similar opinion was submitted to George P. Miller, executive secretary of the state fish and game commission, regarding hunting and fishing permits.

In the latter opinion, Warren ruled, however, the commission has the authority to remove from any enemy alien the privilege of acting as agent for hunting and fishing licenses.—*Sacramento Bee*, February 21.

Sterilization by County Banned

Attorney General Earl Warren's office, in an opinion written yesterday, held that asexualization may not be performed at county expense at a county hospital, even though such an operation has the consent of the person involved and is advisable from a medical standpoint.—*San Francisco Examiner*, February 11.

San Francisco Workers Pay January Health Bill

Unit payments of the City Employees' Health Service System rose to 84 cents for December, it was revealed at a board of directors meeting yesterday which voted to pay doctor bills for that month amounting to \$26,094.

The January hospital bill for city employees was also approved for payment. It totaled \$8744 while x-ray charges were \$1125 and chemical laboratory costs \$459.—*San Francisco Chronicle*, February 20.

Free Hospital Use Surveyed

A survey, just completed, to determine if Los Angeles County is giving free hospital treatment to persons financially able to pay for it disclosed that out of 784 patients seeking such aid over a period of one week, only four, other than emergency cases, had sufficient resources to enter private institutions.

The study was made under the direction of Arthur J. Will, director of county institutions, by Miss Beulah Lewis, director of the bureau of medical social service.—*Los Angeles Times*, February 13.

Cheers For the Doctors and Jeers For Motorists

The United States Public Health Service reports deaths in 1941 were fifty persons fewer for each 1,000 population than they were for the previous year.

This fine record was made in the face of an 18 per cent increase in the automobile accident death rate and a 2 per cent gain in other types of accidents. Hence there must have been a saving somewhere else.

The credit for it goes to the field of medicine and the outstanding gains it has been making in the control and prevention of many diseases. But this satisfactory result can in no way condone the shocking increase in highway deaths—it has been achieved in spite of it.

Cheers are in order for the doctors but the jeers must be reserved for the motorists who gaily continue to make the nation's streets and highways resemble a slaughter house.—*Fresno Bee*, February 23.

Jobless Pay For Sickness Recommended

Social Security Board Also Urges Medical Program and Protection of Workers at War

Washington, March 2. (AP).—The Social Security Board recommended today an expansion of the Federal insurance program to provide compensation for wage losses due to illness and urged also that "a beginning be made" on a program of assuring adequate medical care for all persons.

In its annual report to Congress, transmitted by Federal Security Administrator Paul V. McNutt, the Board said it believed Federal insurance against wage losses due to permanent or temporary disability "is now feasible." . . . —*San Francisco Examiner*, March 3.

Health Most Vital War Front

By Emilia Hodel

"There are three fronts in the health battle—home, industry and war fronts"—said W. W. Bauer, M. D., who spoke today at 2180 Washington St., before the Women's Auxiliary of the San Francisco County Medical Society on "Women and the Public Health." Dr. Bauer is director of the Bureau of Health Education, American Medical Association, and associate editor of *Hygeia*, the health magazine published by the A. M. A.

The most important of these, he feels, is the home front, since the basis of all health begins at the hearth.

"Thus it is that the national health is in the hands of the nation's women," he said. "For it is they who rear the children, feed the family and procure care and nursing in both preventive and curative diseases in the family."

"The major weapon," Dr. Bauer said, "for this home front fight is nutrition. Only don't be too serious about diet. Be healthy for fun."

There is one essential diet which should be followed daily, Dr. Bauer went on to explain. There should be three cups of milk for each person in the family. This may be used in cooking or as a beverage. There should be one serving of meat daily, or a meat substitute, such as cheese plus a legume (peas, beans, lentils, soy beans). There should be three eggs per week. Each day's menu must have two servings of vegetables, one leafy and one should be served raw. There should be two fruits daily, with one of them a citrus fruit. (This does not include limes, which are deficient in vitamin C.) Lastly, there must be a whole grain cereal and an enriched flour product daily.

"After that you can add the trimmings, only remember that no diet, no matter how correct, is adequate without a good cook." . . . —*San Francisco News*, February 24.

Doctors Ignore Sheep Counting As Sleep Inducer

AMA Journal Advises Getting Rested Before Trying to Doze Off

Chicago, Feb. 13. (UP).—The American Medical Association omitted sheep counting today from a list of ten recommended ways to induce sleep.

The A.M.A. Journal said persons who live dynamically without being too tense have four main attributes: A rhythm in their activities with periods of great output and alternating repose; a sense of values that minimizes both effort and strain; ability to reduce muscular tension at will; and ability to fall asleep at will.

Ten Rules For Relaxation

The Journal published ten rules for inducing relaxation:

1. Go easy on the heavy thinking a half hour before retiring; try a game of Chinese checkers.
2. Get ready for bed leisurely, lots of time in the bath.
3. If you read in bed, choose a long haired book "that will bore your mind into unconditional surrender to sleep."
4. Forget fears and hates by thinking about pleasant things, maybe a new wardrobe.

Hop In Thinking

5. Hop from one subject to another in your thinking, stimulating the disjointed, scattered state of consciousness that precedes sleep.

6. Get rid of pressure or pain, lighten bed covers and night clothes.

7. Hot bath, no rub down. Get into bed a bit chilly. Sleep will come as the body warms. If you wake during the night, throw off the covers until body becomes chilly. The coziness that returns with replacement of the covers will induce sleep.

8. Imitate the slow, deep, rhythmic breathing of sleep.
9. Relax the muscles completely.

Get Rested

10. Get rested, before trying to sleep. Get to bed an hour before your regular retiring time night after night to build up a reserve of rest so you can fall asleep without the old struggle.

As an afterthought, the Journal concluded a good sense of humor is one of the prime essentials to avoid hypertension.—*Sacramento Bee*, February 13.

Nine Basic Rules of Eating Laid Down For Public

Nine basic rules for eating well and keeping fit were laid down for Californians today by the State Nutrition Committee, headed by Dr. Agnes Fay Morgan of the University of California College of Agriculture.

In the first place, said the committee, drink milk—a pint a day for the average adult and a quart for every child, or nursing or expectant mother. That will provide calcium, vitamin A, protein, and some of the B vitamins. Supplement this with a generous serving of oranges, grapefruit, tomatoes, green cabbage, or some other raw salad greens to get vitamin C.

Every day should also see on the menu, according to the committee, one or more servings of cooked, leafy green vegetables or a yellow vegetable such as carrots. That will provide vitamin A and some more B. One or more eggs per day will give vitamin A, vitamin B, and protein besides.

To top it all off, adds the committee, have two or more servings of some other vegetable or fruit; one or more servings of lean meat, fish or poultry; some cooked cereal for breakfast and whole wheat bread at all meals; plenty of butter on your bread; and four to six glasses of water daily. If you're still hungry, says the report, eat anything you want; you have what you need.—U. C. *Clip Sheet*.

Farm Home, Family Life

The Farm Bureau believes that the farm home and family living are an integral part of farm operation. To assist the farm family in participating in the defense program and at the same time prepare it to meet the period of reduced cash income, we offer the following recommendations:

1. We recommend that pay patients be admitted to the County Hospital.

2. It is recommended that a committee be set up to investigate the possibility of health insurance with a view to forming an organization to take care of the health problems of the members who participate in the association. . . . —*Oakdale Enterprise*, February 17.

S. M. Man Wins Film Award

For the second time within three years, a San Mateo scientist has written an original motion picture script which received the academy award for the best one reel film of 1941. He is Dr. Ryland Randolph Madison, graduate and a former member of the faculty of Stanford University.

The film, given the plaque of award at the annual banquet of the motion picture industry held in Hollywood Thursday night, was entitled "Of Pups and Puzzles." Narrated by John Nesbitt, and produced by Metro-Goldwyn-Mayer. It was shown in Peninsula and San Francisco theaters during the holidays. This film is one of a score penned by Dr. Madison, who won the same academy award in 1939 for his story titled "That Mothers Might Live."

Dr. Madison while a member of the Stanford faculty made an outstanding record in bacteriological research. After receiving his B. A., M. A. and Ph.D. degrees from Stanford University, Dr. Madison entered the Yale School of Medicine where he will shortly receive his M. D. degree and be commissioned in the U. S. Army Medical Corps.—*San Mateo Times and Leader*, February 28.

Job Program May Expand To Medicine

The social security board yesterday recommended an expansion of the federal insurance program to provide compensation for wage losses due to illness and urged also that "a beginning be made" on a program of assuring adequate medical care for all persons, Associated Press reported from Washington.

In its annual report to congress, transmitted by Federal Security Administrator Paul V. McNutt, the board said it believed federal insurance against wage losses due to permanent or temporary disability "is now feasible."

"A wage earner who is out of work because he is sick," the board observed, "is not entitled to an unemployment benefit even though his past work and earnings would have qualified him for benefits if he were well and available for a job."

The man disabled in younger years, unless by occupational injury or disease covered by a state workmen's compensation law, has no recourse to social insurance, though his family responsibilities may be at their height. If his disability is long standing, any protection he may have earned for his old age or for his dependents in the form of survivors insurance is likely to lapse."

The board said legislation also should be enacted to protect workers entering the armed forces against loss of their federal insurance protection.

One method, it said, might be to "freeze" their insurance status on the date of their induction into service. But a more satisfactory method, the board added, might be to extend the insurance system "to include employment with the armed forces" provided "co-ordination would be effected with programs set up for persons in the regular armed forces and with the special programs for veterans' benefits."—*Sacramento Union*, March 3.

Radical Medical Changes in War Hit

Chicago, March 5 (AP).—The Journal of the American Medical Association contended today that radical changes in the system of medical care should not be considered during the war.

It set forth in an editorial that reports of the Social Security Board and statements by its chairman, Arthur J. Altmeyer, made it clear that the board's goal "is definitely a nationwide system of compulsory sickness insurance" that would include payment of \$3 a day to workers who are in hospitals.—*San Francisco Call Bulletin*, March 5.

Faith in the Doctor

Writing in the December issue of the *Mahoning County Medical Society Bulletin*, the Rev. Roland A. Luhman of the First Reformed Church, Youngstown, Ohio, observes:

"It is hardly necessary to speak to a patient about faith in God when it is obvious that he is wavering in faith in his physician or in his nurse. Speaking for myself alone, I always begin with what is at hand.

"And who is your doctor?" This is generally one of the first queries asked of a patient or of a member of the patient's family. If I know the physician personally, and I do know a great number of them in this city, I always speak of some great service he has performed for some one in the past. His ability is mentioned. His thoughtfulness and his devotion to the patient is brought out. If it happens that the doctor in charge is unknown to me, still he is recommended. For it is my conviction that one practicing medicine and a recognized member of the medical fraternity must have about him some qualities of usefulness. Furthermore, if nurses are employed, a kind word is always spoken in their behalf. Yes, it is necessary for me to begin with what is at hand in order that confidence and faith may be firmly established in the persons into whose hands the patient has entrusted himself.

"So with confidence in man established, one can then proceed to 'build the soul,' as it were. . . ."

"Of course, the methods employed by the cleric to accomplish these ends differ in every case. I speak only for myself. In but a limited number of cases do I offer what is generally referred to as a 'formal' prayer. Prayer is after all the heart's desire either expressed formally or expressed informally through encouragement. I feel that when I have succeeded in awakening within the patient through my sincere interest in him a desire to cooperate with his physician and his nurse and have aroused a willingness on the part of the patient to let loose the 'haunting ghosts' that make him afraid, and have further excited a will to live on the part of the patient, that I have at least partially settled his body, heart and mind. In fact the prayer of the heart is answered even before it is uttered."

The clergy and the medical profession have much in common where the afflictions of mankind are concerned. They can and should supplement each other's efforts.—*Medical Annals of the District of Columbia*.

Reappointment of Medical Trio Is Urged

A strong drive was reported in the Capitol today for reappointment by Governor Olson of three members of the state board of medical examiners whose terms expired on January 15th.

While other candidates for the bard are in the field, it was learned numerous representations have been made to the governor seeking the retention of the following veteran incumbents:

Dr. C. L. Abbott, Oakland; Dr. Percival Dolman, San Francisco, and Dr. George Thomas, Los Angeles.—*Sacramento Bee*, March 2.

MEDICAL JURISPRUDENCE†

HARTLEY F. PEART, Esq.
San Francisco

Court Review of Medical Association Disciplinary Action

JUDICIAL interference with the internal affairs of unincorporated associations, in this case the Kern County Medical Association, was considered and refused by the California Supreme Court in *Smith v. Kern County Medical Association*, 19 A. C. 302, decided January 12, 1942. The exact function of the courts with respect to voluntary associations and the extent to which action of an association in suspending or expelling a member may be subjected to judicial review, have never been as clearly defined as might be desired. In view of this uncertainty it is gratifying to note that the California Supreme Court adopted the theory of the law advanced by counsel for the Kern County Medical Association, namely: That the only function which the courts may perform in this regard is to determine whether the Association has acted within its powers in good faith, in accordance with its laws and the laws of the land.

The action brought in the *Smith* case purported to be one in mandamus to compel an unincorporated society, the Kern County Medical Association, to reinstate the petitioner after an expulsion. Dr. Smith claimed that he was improperly expelled because (a) there were no grounds for expulsion, (b) the members who voted for his expulsion were actuated by fraud and were prejudiced against him, and (c) the expulsion was not in accordance with the rules of the society.

In an attempt to improve the unsatisfactory conditions prevalent in the Kern County Hospital, after direct action against the Board of Supervisors had not achieved all of the desired results, the Kern County Medical Association adopted a resolution providing that failure on the part of any member to resign from the staff of the Kern General Hospital "within a reasonable time, while present unsatisfactory conditions exist in said hospital, shall be construed as a violation of ethics, and shall make such member liable to disciplinary action in accordance with the constitution and by-laws." Charges were brought by the Association against the petitioner accusing him of a violation of this resolution, and of the following principle of medical ethics of the American Medical Association: "It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of the community. To do this is detrimental to the public and to the individual physician, and

† Editor's Note.—This department of CALIFORNIA AND WESTERN MEDICINE, presenting copy submitted by Hartley F. Peart, Esq., will contain excerpts from and syllabi of recent decisions and analyses of legal points and procedures of interest to the profession.

lowers the dignity of the profession." He was also accused of engaging in political activity in connection with the operation of the Kern General Hospital, which resulted in an attempt to monopolize the treatment of the sick in that county, and a consequent overcrowding and understaffing of the Hospital to the detriment of the patients and the standards of the medical profession generally.

Hearings of these charges were had before the committee on grievances and the board of directors, of which the accused had due notice, but which he voluntarily did not attend. The action of expulsion by the board was referred to a vote of the members and all of the proceedings were in strict conformity with the rules of the society. The petitioner appealed to the California Medical Association and to the American Medical Association, each of which in turn declared the expulsion regular and affirmed the action of the local association.

Having failed to effect a reversal of his expulsion through appeals within the medical profession, Dr. Smith initiated this proceeding in mandamus in an attempt to induce the courts to interfere with the internal affairs of the Kern County Medical Association. His petition was denied by the trial court, the by-laws and constitution of the society being found to have been regularly adopted and all proceedings to have been regularly conducted in conformity with the rules to which the petitioner had subscribed on becoming a member of the Association. On appeal to the District Court of Appeal the decision of the trial court was reversed, on the ground that there had not been a quorum of members present at the meeting in which the question of the petitioner's expulsion had been submitted to a vote of the members, and that therefore the action of the Association was not valid. That this result was in direct conflict with the finding of the trial court supported by sufficient evidence was recognized by the Supreme Court, and that tribunal affirmed the decision of the trial court and upheld the action of the Association.

As a general rule the courts will not interfere with the action of an association in suspending or expelling a member, although they may do so where such action was illegal and particularly where property rights are involved. In the case under consideration all action taken was in accordance with the rules of the Association, and there was no question of the petitioner being deprived of any property rights since, in the words of the court, "the only right to which he was entitled as a member of the society was access to reports and medical data which were reserved to the membership as a whole." This being so, there is no question but that the Supreme Court arrived at the correct decision. Any other would have resulted in an unwarranted extension of the Court's authority into the internal affairs of a society whose members agree to be bound by its rules on admission to membership. As was immediately recognized by the Supreme Court it could not entertain any question as to the propriety of the adoption of the code of ethics of the Medical

Association, but must confine itself to an examination of the procedure followed in order to determine if the action was taken in good faith, and in conformity with the rules of the society and with the law of the land.

The province of the courts with respect to the action of medical associations in suspending or expelling a member is illustrated by the closing words of the court's opinion: "Any matter of policy involved in the adoption of the by-laws, the code of ethics, and the resolution in conformity therewith, is a question for the membership itself, and is not debatable here so long as it is not shown that such policy is in violation of the law. Here such violation is not shown. The petitioner, having agreed to be bound by the laws adopted by the membership, is therefore precluded from any relief in this proceeding. (*Levy v. Magnolia Lodge, I.O.O.F., supra; Lawson v. Hewell, 118 Cal. 613, 50 Pac. 763.*) As stated in the last cited case, the contractual relation between the Association and one of its members is that which exists by virtue of the rules of the Association, and so long as the Association acts toward him in accordance with those rules there is no violation of the contract."

REFERENCES: ARTICLE BY F. G. NOVY, JR., M.D.

(Continued from Page 147)

30. Ceder, E. T., and Zon, L.: Treatment of Psoriasis with Massive Doses of Crystalline Vitamin D and Irradiated Ergosterol: A preliminary report, *Pub. Health Rep.*, 52:1580, 1937. Brunsting, L. A.: Treatment of Psoriasis by Ingestion of Massive Doses of Vitamin D, *Prov. Staff Meet., Mayo Clinic*, 13:280, 1939.
31. Clarke, G. E.: Treatment of Psoriasis with Concentrated Viosterol, *Arch. Dermat. and Syph.* 41:664 (April), 1940.
32. King, H., and Hamilton, C. M.: Pemphigus Controlled by Vitamin D. *Arch. Dermat. and Syph.* 39:515 (March), 1939.
33. Tauber, E. B., and Clarke, G. E.: Treatment of Pemphigus with Concentrated Viosterol, *Arch. Dermat. and Syph.* 40:82 (July), 1939.
34. To Be Published: Society Transactions (S. F. Dermat. Soc.) *Arch. Dermat. and Syph.*
35. Lever, W. J., and Talbot, J. H.: Action of Dihydroxycholesterol in Chronic Pemphigus, *Arch. Dermat. and Syph.* 43:341 (Feb.), 1941.
36. Cornbleet, T., and Struck, H. C.: Calcium Metabolism in Scleroderma, *Arch. Dermat. and Syph.* 35:188 (March), 1937.
37. Goldfarb, A. E.: Treatment of Psoriasis with Lemon Citrin (Vitamin P) Citrin Lemonade and Ascorbic Acid. *Arch. Dermat. and Syph.* 43:536 (March), 1941.

Known as "The House of Mending Hearts," it houses about one hundred young, underprivileged patients. Its work on rheumatic heart disease, and its high standard for the care of patients have brought to Irvington House great distinction as an experimental heart-saving sanatorium and training center, and has brought forth inquiries from as far as South America and Australia on the matter of setting up of convalescent homes for cardiac youngsters.

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TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. XV, No. 3, March, 1917

EXCERPTS FROM EDITORIAL NOTES

The Annual Meeting—Coronado—April 17, 18, 19, 1917.—From the information at hand, a large and State-wide attendance is promised at the annual meeting at Coronado. The scientific program contains an unusual quota of papers dealing with debatable fields. . . .

A Bill for the Promotion of Medical Research.—In another column we publish a clear-cut account of the substance of a bill whereby it is proposed that properly-qualified research institutions may procure, for experimental purposes, unclaimed animals at the public pound. The present method of buying stray dogs and cats has led to many unpleasant complications, because it is inevitable that occasionally a stolen pet is unwittingly purchased. The proposed bill serves the purpose of allowing the laboratories to buy dogs which are legally, and without question of a doubt, stray animals, and completely precludes the possible accidental entrance of a prized animal into the experimental room. All animals purchased under this bill would, under any circumstances, be destroyed at the pound. Why not destroy some of them in a manner beneficial to the advance of medical knowledge and to the public? . . .

Medical Legislation.—On February 26, 1917, the California State Legislature will reconvene for the purpose of considering various bills that were presented during the first half of the session, and also divers amendments. From this time on, more than ever before, it is important that those interested in medical laws be on the alert to prevent the passage of any vicious bills or any amendments. Already there have appeared amendments that are designed to do away with the protection of the public against half-baked, half-educated, so-called doctors. There are three different "Drugless" crowds, each one of which is extremely active. . . . For reasons heretofore given, the following bills are extremely undesirable and ought to be defeated:

Senate Bill No. 24 (Scott). A special "Drugless" bill.

Senate Bill No. 279 (Inmann). A special "Chiropractic" bill.

Senate Bill No. 105 (Ballard). A special "Chiropractic" bill, introduced at the request of the head of a notorious Chiropractic institution, which has been in the limelight more or less constantly.

Senate Bill No. 760 (Stuckenbruck). A vicious amendment, giving special privilege to one of the freck cults, and extending to an almost unlimited degree the Reciprocity Act.

Assembly Bill No. 95. (Argobright). Special legislation on behalf of Chiropractors.

Assembly Bill No. 57 (Hilton). Special legislation on behalf of some of the "Drugless" crowd.

Senate Bill No. 110 (Luce). Places all health matters, and also the regulation of the practicing of Medicine, Dentistry, Optometry, and Embalming, under the supervision of three lay persons. . . .

(Continued in Front Advertising Section, Page 18)

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association activities some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M.D.

Secretary-Treasurer

News

"After serving three years in the State Attorney General's office, Thomas I. Coakley, former dance orchestra leader and brother of Alameda County Chief Assistant District Attorney J. Frank Coakley, resigned today to enter private practice of law. Coakley, who handled all State Board of Health and State Board of Medical Examiners matters for the Attorney General's office, will be associated with Attorney Robert Littler in private practice. . . ." (Oakland *Tribune*, Jan. 14, 1942.)

"A one-time grocery clerk, who promoted himself to a bogus lieutenantancy in the army medical reserve, was sentenced today to serve six months in the county jail by Municipal Judge Twain Michelsen. The man, Gerald Armstead Donley, 24, who styled himself Dr. Patrick Michael Dennis O'Donley, and donned the uniform and gold bars of a second lieutenant, pleaded guilty to a charge of violating the state medical law. . . . Donley said he acquired the hypodermic needle and a quantity of narcotics while working as a Bacteriologist in a Berkeley Laboratory. . . ." (San Francisco *Call-Bulletin*, Jan. 15, 1942.)

"Famed proponent of the 'raw food cult' and 'back to nature' living, Dr. St. Louis Albert Estes was held in the Los Angeles County jail yesterday. He was arrested on a bench warrant from San Francisco, having lost an appeal from a 1940 Municipal Court conviction on charges of having practiced and prescribed medicine without a license. Before him is the prospect of having to meet the sentence of San Francisco's Municipal Judge J. E. White that he serve 150 days in the county jail there on each of 10 counts of conviction, and, in addition, pay a fine of \$250 on each count—a total of four years and two months and \$2500. . . . When asked his age at the booking office, Dr. Estes thought for a moment and then said, 'Oh, around 65.' So '65' he is today and to the detriment of his declaration some years ago that he expected to live to the age of 150. Had he held to the yearly progression that gave his years as '69' in 1928, and made him '79' three years ago when his twelfth child was born in San Francisco, he would be '81' today and safely past the half-way mark. . . . In jail Dr. Estes insisted that he had not 'jumped' a \$250 appeal bond, and had failed to return to San Francisco recently when his Appellate Court pleas were lost because his attorneys had told him a higher court review would be sought. Veteran of many a courtroom joust, Dr. Estes sued the California State Medical Board for \$500,000 in 1939 following an arrest on charges of violating the State Medical Practice Act, from which he was freed." (Los Angeles *Examiner*, Jan. 4, 1942.) (Previous entries Feb., 1939; May and August, 1940, Feb., 1942.)

(Continued in Back Advertising Section, Page 34)

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6. News items are submitted by the Secretary of the Board.

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* J.A.M.A., 93:1110, Oct. 12, 1929

Bruckner, *Die Biochemie des Tabaks*, 1936

** *The Military Surgeon*, Vol. 89, No. 1, p. 7, July, 1941

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TWENTY-FIVE YEARS AGO

(Continued from Text Page 166)

EXCERPTS FROM MISCELLANEOUS ARTICLES

From an Article on "Animal Experimentation and Medical Progress.—An Argument in Support of a Bill Now Before the State Legislature," by G. H. Whipple, Director of the George Williams Hooper Foundation for Medical Research.—A bill has been recently introduced in the state legislature which is of considerable interest to the medical profession, and of much importance to the medical schools of the state. This bill aims to further medical investigation by making available for laboratory purposes such unclaimed dogs and cats in the city pounds as otherwise will be destroyed. The bill provides that universities and medical schools can obtain cats for a fee of fifty cents, and dogs for a fee of one dollar, paid to the pounds for these unclaimed animals, provided the animals so obtained are kept in a sanitary manner, and provided that no surgical operation is performed on these animals except under surgical anaesthesia. There are many excellent reasons why such a bill should become a law, and some of these reasons are incorporated in this brief review. . . .

From an Article on "The Limitations of Roentgenology in Tumors of the Kidney," by Albert Soiland, M.D., Los Angeles, Cal.—In harmony with the title of this brief article it may be said that, excepting the condition of stone and hydronephrosis, the diagnostic value of the x-ray in all other surgical lesions of the kidney, including tumor, is as yet debatable. As the available literature upon this particular subject is not extensive no references are made, and these remarks are all merely the writer's own opinions, based upon a moderate amount of work along this line. . . .

(Continued on Page 20)

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BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 166)

"A bespectacled, mild-appearing man, held for the FBI as John William Melville, sat in the county jail today and asserted he had had only two wives—instead of the nine federal agents asserted he wooed and won. Specifically, the Federal Bureau of Investigation accused Melville of violating his parole from a four-year bank robbery term at Leavenworth, Kansas, prison. . . . Melville, 40, said he came here three months ago, with his second mate, and that his first had died in 1927. He said he was born in Newcastle, England, and took a degree in medicine from 'Buckingham Medical School, a branch of Oxford.' The FBI listed his birthplace as Roanoke, Ohio, and said he picked up his medical knowledge while working in the Ohio state penitentiary hospital. Federal agents asserted that, to impress women, Melville related he had spent a couple of years with the government, but did not add that they were in a penitentiary. Then, they said, he obtained as much of the women's property as possible, passed bad checks and disappeared." (San Francisco Call-Bulletin, Jan. 13, 1942.)

"Lloyd E. Tilbury, Glendale osteopath, was accused yesterday of murder and of performing an illegal operation in a complaint filed by Deputy District Attorney Percy Hammon. According to District Attorney's Investigator Ned Keeler, Tilbury treated Mrs. Marie Lucille Hollister, 15157 Cohasset Street, on December 2, 1941, and she died December 11 of tetanus infection allegedly

(Continued on Page 36)

Advertisers in your OFFICIAL JOURNAL will appreciate requests for literature